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**IN THE SUPERIOR COURT OF THE STATE OF WASHINGTON
IN AND FOR THE COUNTY OF LINCOLN**

STATE OF WASHINGTON,
DEPARTMENT OF ECOLOGY,

Plaintiff,

v.

LINCOLN COUNTY

STATE OF WASHINGTON,
DEPARTMENT OF
TRANSPORTATION

LINCOLN MUTUAL #3
JOE AND TINA CLARK
JEROME CLARK

Defendants.

NO.

CONSENT DECREE

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1 **I. INTRODUCTION**

2 A. In entering into this Consent Decree (Decree), the mutual objective of the
3 Washington State Department of Ecology (Ecology), Lincoln County, the Washington State
4 Department of Transportation, Lincoln Mutual #3, Joe and Tina Clark, and Jerome Clark is to
5 provide for remedial action at a facility where there has been a release or threatened release of
6 hazardous substances. Lincoln County, the Washington State Department of Transportation,
7 Lincoln Mutual #3, Joe and Tina Clark, and Jerome Clark shall be referred to herein as the
8 "Defendants." Defendants Lincoln Mutual #3, Joe and Tina Clark, Jerome Clark, and the
9 Washington State Department of Transportation, all of whom have been named by Ecology as
10 "potentially liable persons" pursuant to RCW 70.105D, are not signatories to this Decree. This
11 Decree requires the Defendants to undertake the following remedial action(s):

- 12 (1) Excavation of petroleum contaminated soils;
- 13 (2) Backfill with clean soils mixed with an oxygen-releasing compound;
- 14 (3) Installation of an impervious barrier and stormwater control system
15 according to design specifications approved by Ecology;
- 16 (4) Groundwater monitoring through the quarterly sampling of existing
17 wells; and
- 18 (5) Institutional controls in the form of restrictive covenants, fences, signs,
19 and the maintenance of these controls.

20 Ecology has determined that these actions are necessary to protect public health and the
21 environment.

22 B. The Complaint in this action is being filed simultaneously with this Decree. An
23 answer has not been filed, and there has not been a trial on any issue of fact or law in this case.
24 However, the parties wish to resolve the issues raised by Ecology's Complaint. In addition, the
25

1 parties agree that settlement of these matters without litigation is reasonable and in the public
2 interest and that entry of this Decree is the most appropriate means of resolving these matters.

3 C. In signing this Decree, Defendants agree to its entry and agree to be bound by
4 its terms.

5 D. By entering into this Decree, the parties do not intend to discharge nonsettling
6 parties from any liability they may have with respect to matters alleged in the complaint. The
7 parties retain the right to seek reimbursement, in whole or in part, from any liable persons for
8 sums expended at the Site, including but not limited to sums expended under this Decree.

9 E. This Decree shall not be construed as proof of liability or responsibility for any
10 releases of hazardous substances or cost for remedial action nor an admission of any facts;
11 provided, however, that the Defendants shall not challenge the jurisdiction of Ecology in any
12 proceeding to enforce this Decree.

13 F. The Court is fully advised of the reasons for entry of this Decree, and good
14 cause having been shown;

15 IT IS HEREBY ORDERED, ADJUDGED, AND DECREED AS FOLLOWS:

16 **II. JURISDICTION**

17 A. This Court has jurisdiction over the subject matter and over the parties pursuant
18 to chapter 70.105D RCW, the Model Toxics Control Act (MTCA).

19 B. Authority is conferred upon the Washington State Attorney General by RCW
20 70.105D.040(4)(a) to agree to a settlement with any potentially liable person if, after public
21 notice and hearing, Ecology finds the proposed settlement would lead to a more expeditious
22 cleanup of hazardous substances. RCW 70.105D.040(4)(b) requires that such a settlement be
23 entered as a consent decree issued by a court of competent jurisdiction.

24 C. Ecology has determined that a release or threatened release of hazardous
25 substances has occurred at the Site that is the subject of this Decree.

1 D. Ecology has given notice to Defendants, as set forth in RCW 70.105D.020(16),
2 of Ecology's determination that the Defendants are potentially liable persons for the Site and
3 that there has been a release or threatened release of hazardous substances at the Site.

4 E. The actions to be taken pursuant to this Decree are necessary to protect public
5 health, welfare, and the environment.

6 F. Defendants have agreed to undertake the actions specified in this Decree and
7 consents to the entry of this Decree under the MTCA.

8 **III. PARTIES BOUND**

9 This Decree shall apply to and be binding upon the signatories to this Decree (Parties),
10 their successors and assigns. The undersigned representative of each party hereby certifies that
11 he or she is fully authorized to enter into this Decree and to execute and legally bind such party
12 to comply with the Decree. Defendants agree to undertake all actions required by the terms
13 and conditions of this Decree and not to contest state jurisdiction regarding this Decree. No
14 change in ownership or corporate status shall alter the responsibility of the Defendants under
15 this Decree. Defendants shall provide a copy of this Decree to all agents, contractors and
16 subcontractors retained to perform work required by this Decree and shall ensure that all work
17 undertaken by such contractors and subcontractors will be in compliance with this Decree.

18 **IV. DEFINITIONS**

19 Except for as specified herein, all definitions in WAC 173-340-200 apply to the terms in
20 this Decree.

21 A. Site: The Site, referred to as the South Wilbur Petroleum Contamination Site, is
22 located at the area of the intersection of Anne Street and Front Avenue, Wilbur, Washington.
23 The Site is more particularly described in Exhibit A to this Decree that is a detailed site
24 diagram. The Site is a "facility" under RCW 70.105D.020(4).
25

1 B. Parties: Refers to the Washington State Department of Ecology and Lincoln
2 County, Washington State Department of Transportation, Lincoln Mutual #3, Joe and Tina
3 Clark, and Jerome Clark.

4 C. Defendants: Refers to Lincoln County, Washington State Department of
5 Transportation, Lincoln Mutual #3, Joe and Tina Clark, and Jerome Clark.

6 D. Consent Decree or Decree: Refers to this Consent Decree and each of the
7 exhibits to the Decree. All exhibits are integral and enforceable parts of this Consent Decree
8 and are hereby incorporated by reference. The terms "Consent Decree" or "Decree" shall
9 include all Exhibits to the Consent Decree. In the event of a conflict between an Exhibit and
10 the Decree, the Decree shall prevail.

11 V. STATEMENT OF FACTS

12 Ecology makes the following finding of facts without any express or implied
13 admissions by Defendants.

14 1. The South Wilbur Petroleum Contamination Site is located in the area of the
15 intersection of Anne Street and Front Avenue in Wilbur, WA and consists of three properties,
16 the former Washington State Department of Transportation (WSDOT) maintenance facility,
17 the Lincoln County maintenance facility, and the former Lincoln Mutual #3 property.

18 2. The former WSDOT property is located at 103 SE Front Avenue. It was
19 operated as a vehicle fueling and maintenance yard by WSDOT from the 1930s until the early
20 1970s.

21 3. The Lincoln County maintenance facility is located at 108 and 112 SE Anne
22 Street. It has been operated as a vehicle fueling and maintenance yard by Lincoln County from
23 the 1930s through the present.

24 4. The former Lincoln Mutual #3 property is located at 15 SE Anne Street. It was
25 operated as a fueling station by Lincoln Mutual #3 from 1963 through 1991. In January 1993,

1 the property was purchased by Joe and Tina Clark and Jerome Clark (J.C.T Properties) and the
2 building on-site is currently used as office and storage space.

3 5. The WSDOT facility had one 1,000-gallon diesel underground storage tank
4 (UST) and one 1,000-gallon gasoline UST. Diesel-contaminated soil was discovered during
5 the removal of the USTs in 1991.

6 6. The Lincoln County facility had four USTs of various volumes containing
7 diesel, gasoline, and waste oil. By 1995 they had all been removed.

8 7. The Lincoln Mutual #3 facility had an unknown number of USTs which
9 contained gasoline and diesel. They were all removed prior to 1991.

10 8. Site investigations by WSDOT in 1997 and 1998 found petroleum
11 contamination in soil and groundwater on and upgradient of the WSDOT and Lincoln County
12 properties.

13 9. Ecology's contractor, SAIC, performed additional site characterization in 1998.
14 Soil contamination below five feet and groundwater contamination was documented on all
15 three properties. Although no contamination was detected in adjacent Goose Creek, the
16 shallow groundwater system feeds the surface water.

17 10. Diesel, gasoline, benzene, toluene, ethyl benzene, and xylene are the
18 contaminants of concern in soil and groundwater.

19 11. Petroleum and petroleum products are hazardous substances as defined in RCW
20 70.105D.020(7)(d).

21 12. The site was evaluated through the Washington Ranking Method (WARM) in
22 August of 1999 and received a ranking of 1.

23 13. In certified correspondence dated August 9, 1999, Ecology notified the PLPs of
24 the preliminary finding of potential liability and requested comment on that finding.

25

1 14. In certified correspondence dated October 6, 1999, Ecology notified the PLPs of
2 their status as potentially liable persons with regard to the release of hazardous substances at
3 the South Wilbur Petroleum Site.

4 15. On August 7, 2000, Ecology and Lincoln County entered into Agreed Order No.
5 00TCPER-1465, under which Lincoln County conducted a remedial investigation to determine
6 the extent of contamination at the Site and prepared a feasibility study of remedial alternatives
7 for the Site.

8 16. Under the Agreed Order, Lincoln County submitted the Final Report – Lincoln
9 County RI/FS Report South Wilbur Petroleum Contamination Site (May 2002) (RI/FS). The
10 RI/FS presents the results of soil and groundwater sampling. Ecology approved the RI/FS on
11 June 20, 2002.

12 17. A Cleanup Action Plan was prepared for the Site by Ecology that determined
13 the contaminants of concern, selected the cleanup alternative, and outlined the remedial actions
14 to be taken.

15
16 **VI. WORK TO BE PERFORMED**

17 This Decree contains a program designed to protect public health, welfare and the
18 environment from the known release, or threatened release, of hazardous substances or
19 contaminants at, on, or from the Site through implementation of the Cleanup Action Plan
20 (Exhibit B).

21 1. Defendants shall implement the Cleanup Action Plan (Exhibit B).

22 2. Defendants shall perform all tasks and submit to Ecology all deliverables set
23 forth in the Scope of Work and Schedule (Exhibit C). The Scope of Work and Schedule
24 (Exhibit C) will serve as a detailed description of the work elements outlined in the Cleanup
25 Action Plan.

1 3. The Engineering Design Report, Construction Plans and Specifications, and
2 Operations and Maintenance Plan are subject to review and approval by Ecology before the
3 Defendants perform work under those plans. The Defendants shall incorporate Ecology's
4 comments on the drafts into the final versions of these documents. Upon approval, these
5 documents shall become integral and enforceable parts of this Decree, and shall be complied
6 with by the Defendants.

7 4. Within sixty (60) days of entry of this Decree, Defendants shall record with the
8 Lincoln County Auditor's Office the Restrictive Covenant attached to this Decree as Exhibit D
9 and provide Ecology with proof of such recording.

10 5. Defendants agree not to perform any remedial actions outside the scope of this
11 Decree unless the parties agree to amend the scope of work to cover these actions. All work
12 conducted under this decree shall be done in accordance with Ch. 173-340 WAC unless
13 otherwise provided herein.

14 **VII. DESIGNATED PROJECT COORDINATORS**

15 The project coordinator for Ecology is:

16 Sandra Treccani
17 Department of Ecology
18 Eastern Regional Office
19 4601 N. Monroe, Suite 202
20 Spokane, WA 99205-1295

21 The project coordinator for the Defendants is:

22 Bob Breshears
23 Lincoln County Public Works
24 27234 SR 25 N
25

1 Davenport, WA 99122

2 Each project coordinator shall be responsible for overseeing the implementation of this
3 Decree. The Ecology project coordinator will be Ecology's designated representative at the
4 Site. To the maximum extent possible, communications between Ecology and the Defendants
5 and all documents, including reports, approvals, and other correspondence concerning the
6 activities performed pursuant to the terms and conditions of this Decree, shall be directed
7 through the project coordinators. The project coordinators may designate, in writing, working
8 level staff contacts for all or portions of the implementation of the remedial work required by
9 this Decree. The project coordinators may agree to minor modifications to the work to be
10 performed without formal amendments to this Decree. Minor modifications will be
11 documented in writing by Ecology.

12 Any party may change its respective project coordinator. Written notification shall be
13 given to the other parties at least ten (10) calendar days prior to the change.

14 **VIII. PERFORMANCE**

15 All work performed pursuant to this Decree shall be under the direction and
16 supervision, as necessary, of a professional engineer or hydrogeologist, or equivalent, with
17 experience and expertise in hazardous waste site investigation and cleanup. Any construction
18 work must be under the supervision of a professional engineer. Defendants shall notify
19 Ecology in writing as to the identity of such engineer(s) or hydrogeologist(s), or others and of
20 any contractors and subcontractors to be used in carrying out the terms of this Decree, in
21 advance of their involvement at the Site.

22 **IX. ACCESS**

23 Ecology or any Ecology authorized representatives shall have the authority to enter and
24 freely move about all property at the Site at all reasonable times for the purposes of, inter alia:
25 inspecting records, operation logs, and contracts related to the work being performed pursuant

1 to this Decree; reviewing Defendants' progress in carrying out the terms of this Decree;
2 conducting such tests or collecting such samples as Ecology may deem necessary; using a
3 camera, sound recording, or other documentary type equipment to record work done pursuant
4 to this Decree; and verifying the data submitted to Ecology by the Defendants. All parties with
5 access to the Site pursuant to this paragraph shall comply with approved health and safety
6 plans.

7 **X. SAMPLING, DATA REPORTING, AND AVAILABILITY**

8 With respect to the implementation of this Decree, Defendants shall make the results of
9 all sampling, laboratory reports, and/or test results generated by it, or on its behalf available to
10 Ecology and shall submit these results in accordance with Section XI of this Decree.

11 In accordance with WAC 173-340-840(5), sampling data shall be submitted by the
12 Defendants in an electronic format agreeable to Ecology's site coordinator. These submittals
13 shall be provided to Ecology in accordance with Section XI of this Decree.

14 If requested by Ecology, Defendants shall allow split or duplicate samples to be taken
15 by Ecology and/or its authorized representatives of any samples collected by Defendants
16 pursuant to the implementation of this Decree. Defendants shall notify Ecology seven (7) days
17 in advance of any sample collection or work activity at the Site. Ecology shall, upon request,
18 allow split or duplicate samples to be taken by Defendants or its authorized representative of
19 any samples collected by Ecology pursuant to the implementation of this Decree provided it
20 does not interfere with the Department's sampling. Without limitation on Ecology's rights
21 under Section IX, Ecology shall endeavor to notify Defendants prior to any sample collection
22 activity.

1 **XI. PROGRESS REPORTS**

2 Defendants shall submit to Ecology written progress reports that describe the actions
3 taken during the previous month to implement the requirements of this Decree. The progress
4 reports shall include the following:

5 A. A list of on-site activities that have taken place during the month;

6 B. Detailed description of any deviations from required tasks not otherwise
7 documented in project plans or amendment requests;

8 C. Description of all deviations from the schedule (Exhibit C) during the current
9 month and any planned deviations in the upcoming month;

10 D. For any deviations in schedule, a plan for recovering lost time and maintaining
11 compliance with the schedule;

12 E. All raw data (including laboratory analysis) received by the Defendants during
13 the past month and an identification of the source of the sample; and

14 F. A list of deliverables for the upcoming month if different from the schedule.

15 All progress reports shall be submitted monthly from the effective date of this Decree
16 until three (3) months after implementation of the cleanup action is completed. Thereafter,
17 Defendants shall submit progress reports annually. All progress reports shall be submitted by
18 the tenth (10) day of the month in which they are due after the effective date of this Decree.
19 Progress reports shall be sent to Ecology’s project coordinator by facsimile and first class U.S.
20 mail. Unless otherwise specified, any other documents submitted pursuant to this Decree shall
21 be sent by certified mail, return receipt requested, to Ecology’s project coordinator.

22 **XII. RETENTION OF RECORDS**

23 Defendants shall preserve, during the pendency of this Decree and for ten (10) years
24 from the date this Decree is no longer in effect as provided in Section XXV, all records,
25 reports, documents, and underlying data in its possession relevant to the implementation of this

1 Decree and shall insert in contracts with project contractors and subcontractors a similar record
2 retention requirement. Upon request of Ecology, Defendants shall make all non-archived
3 records available to Ecology and allow access for review. All archived records shall be made
4 available to Ecology within a reasonable period of time.

5 **XIII. TRANSFER OF INTEREST IN PROPERTY**

6 No voluntary or involuntary conveyance or relinquishment of title, easement, leasehold,
7 or other interest held by a Defendant in any portion of the Site shall be consummated without
8 provision for continued operation and maintenance of any containment system, treatment
9 system, and monitoring system installed or implemented pursuant to this Decree.

10 Prior to transfer of any legal or equitable interest in all or any portion of the property,
11 and during the effective period of this Decree, Defendants shall serve a copy of this Decree
12 upon any prospective purchaser, lessee, transferee, assignee, or other successor in interest of
13 the property; and, at least thirty (30) days prior to any transfer, Defendants shall notify Ecology
14 of said contemplated transfer.

15 **XIV. RESOLUTION OF DISPUTES**

16 A. In the event a dispute arises as to an approval, disapproval, proposed
17 modification or other decision or action by Ecology's project coordinator, the parties shall
18 utilize the dispute resolution procedure set forth below.

19 (1) Upon receipt of the Ecology project coordinator's decision, the
20 Defendants have fourteen (14) days within which to notify Ecology's project coordinator of
21 their objection to the decision.

22 (2) The parties' project coordinators shall then confer in an effort to resolve
23 the dispute. If the project coordinators cannot resolve the dispute within fourteen (14) days,
24 Ecology's project coordinator shall issue a written decision.

1 (3) Defendants may then request Ecology management review of the
2 decision. This request shall be submitted in writing to the Toxics Cleanup Program Manager
3 within seven (7) days of receipt of Ecology's project coordinator's decision.

4 (4) Ecology's Program Manager shall conduct a review of the dispute and
5 shall issue a written decision regarding the dispute within thirty (30) days of the Defendants'
6 request for review. The Program Manager's decision shall be Ecology's final decision on the
7 disputed matter.

8 B. If Ecology's final written decision is unacceptable to Defendants, Defendants
9 have the right to submit the dispute to the Court for resolution. The parties agree that one
10 judge should retain jurisdiction over this case and shall, as necessary, resolve any dispute
11 arising under this Decree. In the event Defendants present an issue to the Court for review, the
12 Court shall review the action or decision of Ecology on the basis of whether such action or
13 decision was arbitrary and capricious and render a decision based on such standard of review.

14 C. The parties agree to only utilize the dispute resolution process in good faith and
15 agree to expedite, to the extent possible, the dispute resolution process whenever it is used.
16 Where either party utilizes the dispute resolution process in bad faith or for purposes of delay,
17 the other party may seek sanctions.

18 Implementation of these dispute resolution procedures shall not provide a basis for
19 delay of any activities required in this Decree, unless Ecology agrees in writing to a schedule
20 extension or the Court so orders.

21 **XV. AMENDMENT OF CONSENT DECREE**

22 This Decree may only be amended by a written stipulation among the parties to this
23 Decree that is entered by the Court or by order of the Court. Such amendment shall become
24 effective upon entry by the Court. Agreement to amend shall not be unreasonably withheld by
25 any party to the Decree.

1 Defendants shall submit any request for an amendment to Ecology for approval.
2 Ecology shall indicate its approval or disapproval in a timely manner after the request for
3 amendment is received. If the amendment to the Decree is substantial, Ecology will provide
4 public notice and opportunity for comment. Reasons for the disapproval shall be stated in
5 writing. If Ecology does not agree to any proposed amendment, the disagreement may be
6 addressed through the dispute resolution procedures described in Section XIV of this Decree.

7 **XVI. EXTENSION OF SCHEDULE**

8 A. An extension of schedule shall be granted only when a request for an extension
9 is submitted in a timely fashion, generally at least thirty (30) days prior to expiration of the
10 deadline for which the extension is requested, and good cause exists for granting the extension.
11 All extensions shall be requested in writing. The request shall specify the reason(s) the
12 extension is needed.

13 An extension shall only be granted for such period of time as Ecology determines is
14 reasonable under the circumstances. A requested extension shall not be effective until
15 approved by Ecology or the Court. Ecology shall act upon any written request for extension in
16 a timely fashion. It shall not be necessary to formally amend this Decree pursuant to Section
17 XV when a schedule extension is granted.

18 B. The burden shall be on the Defendants to demonstrate to the satisfaction of
19 Ecology that the request for such extension has been submitted in a timely fashion and that
20 good cause exists for granting the extension. Good cause includes, but is not limited to, the
21 following.

22 (1) Circumstances beyond the reasonable control and despite the due
23 diligence of Defendants including delays caused by unrelated third parties or Ecology, such as
24 (but not limited to) delays by Ecology in reviewing, approving, or modifying documents
25 submitted by Defendants; or

1 (2) Acts of God, including fire, flood, blizzard, extreme temperatures,
2 storm, or other unavoidable casualty; or

3 (3) Endangerment as described in Section XVII.

4 However, neither increased costs of performance of the terms of the Decree nor
5 changed economic circumstances shall be considered circumstances beyond the reasonable
6 control of Defendants.

7 C. Ecology may extend the schedule for a period not to exceed ninety (90) days,
8 except where an extension is needed as a result of:

9 (1) Delays in the issuance of a necessary permit which was applied for in a
10 timely manner; or

11 (2) Other circumstances deemed exceptional or extraordinary by Ecology;
12 or

13 (3) Endangerment as described in Section XVII.

14 Ecology shall give Defendants written notification in a timely fashion of any extensions
15 granted pursuant to this Decree.

16 **XVII. ENDANGERMENT**

17 In the event Ecology determines that activities implementing or in noncompliance with
18 this Decree, or any other circumstances or activities, are creating or have the potential to create
19 a danger to the health or welfare of the people on the Site or in the surrounding area or to the
20 environment, Ecology may order Defendants to stop further implementation of this Decree for
21 such period of time as needed to abate the danger or may petition the Court for an order as
22 appropriate. During any stoppage of work under this section, the obligations of Defendants
23 with respect to the work under this Decree which is ordered to be stopped shall be suspended
24 and the time periods for performance of that work, as well as the time period for any other
25 work dependent upon the work which is stopped, shall be extended, pursuant to Section XVI of

1 this Decree, for such period of time as Ecology determines is reasonable under the
2 circumstances.

3 In the event Defendants determine that activities undertaken in furtherance of this
4 Decree or any other circumstances or activities are creating an endangerment to the people on
5 the Site or in the surrounding area or to the environment, Defendants may stop implementation
6 of this Decree for such period of time necessary for Ecology to evaluate the situation and
7 determine whether Defendants should proceed with implementation of the Decree or whether
8 the work stoppage should be continued until the danger is abated. Defendants shall notify
9 Ecology's project coordinator as soon as possible, but no later than twenty-four (24) hours after
10 such stoppage of work, and thereafter provide Ecology with documentation of the basis for the
11 work stoppage. If Ecology disagrees with the Defendants' determination, it may order
12 Defendants to resume implementation of this Decree. If Ecology concurs with the work
13 stoppage, the Defendants' obligations shall be suspended and the time period for performance
14 of that work, as well as the time period for any other work dependent upon the work which was
15 stopped, shall be extended, pursuant to Section XVI of this Decree, for such period of time as
16 Ecology determines is reasonable under the circumstances. Any disagreements pursuant to the
17 clause shall be resolved through the dispute resolution procedures in Section XIV.

18 **XVIII. OTHER ACTIONS**

19 Ecology reserves its rights to institute remedial action(s) at the Site and subsequently
20 pursue cost recovery, and Ecology reserves its rights to issue orders and/or penalties or take
21 any other enforcement action pursuant to available statutory authority under the following
22 circumstances:

23 1. Where Defendants fail, after notice, to comply with any requirement of this
24 Decree;

1 2. In the event or upon the discovery of a release or threatened release not
2 addressed by this Decree;

3 3. Upon Ecology's determination that action beyond the terms of this Decree is
4 necessary to abate an emergency situation which threatens public health or welfare or the
5 environment; or

6 4. Upon the occurrence or discovery of a situation beyond the scope of this Decree
7 as to which Ecology would be empowered to perform any remedial action or to issue an order
8 and/or penalty, or to take any other enforcement action. This Decree is limited in scope to the
9 geographic Site described in Exhibit A and to those contaminants that Ecology knows to be at
10 the Site when this Decree is entered.

11 Ecology reserves all rights regarding the injury to, destruction of, or loss of natural
12 resources resulting from the release or threatened release of hazardous substances from the
13 South Wilbur Petroleum Contamination Site.

14 Ecology reserves the right to take any enforcement action whatsoever, including a cost
15 recovery action, against potentially liable persons not party to this Decree.

16 **XIX. INDEMNIFICATION**

17 Defendants agree to indemnify and save and hold the State of Washington, its
18 employees, and agents harmless from any and all claims or causes of action for death or
19 injuries to persons or for loss or damage to property arising from or on account of acts or
20 omissions of Defendants, their officers, employees, agents, or contractors in entering into and
21 implementing this Decree. However, the Defendants shall not indemnify the State of
22 Washington nor save nor hold its employees and agents harmless from any claims or causes of
23 action arising out of the negligent acts or omissions of the State of Washington, or the
24 employees or agents of the State, in implementing the activities pursuant to this Decree.

1 **XX. COMPLIANCE WITH APPLICABLE LAWS**

2 A. All actions carried out by Defendants pursuant to this Decree shall be done in
3 accordance with all applicable federal, state, and local requirements, including requirements to
4 obtain necessary permits, except as provided in paragraph B of this section.

5 B. Pursuant to RCW 70.105D.090(l), the substantive requirements of chapters
6 70.94, 70.95, 70.105, 75.20, 90.48, and 90.58 RCW, and of any laws requiring or authorizing
7 local government permits or approvals for the remedial action under this Decree that are
8 known to be applicable at the time of entry of the Decree have been included in Exhibit B, the
9 Cleanup Action Plan, and are binding and enforceable requirements of the Decree. Defendants
10 have a continuing obligation to determine whether additional permits or approvals addressed in
11 RCW 70.105D.090(l) would otherwise be required for the remedial action under this Decree.
12 In the event either Defendants or Ecology determine that additional permits or approvals
13 addressed in RCW 70.105D.090(l) would otherwise be required for the remedial action under
14 this Decree, it shall promptly notify the other party of this determination. Ecology shall
15 determine whether Ecology or Defendants shall be responsible to contact the appropriate state
16 and/or local agencies. If Ecology so requires, Defendants shall promptly consult with the
17 appropriate state and/or local agencies and provide Ecology with written documentation from
18 those agencies of the substantive requirements those agencies believe are applicable to the
19 remedial action. Ecology shall make the final determination on the additional substantive
20 requirements that must be met by Defendants and on how Defendants must meet those
21 requirements. Ecology shall inform Defendants in writing of these requirements. Once
22 established by Ecology, the additional requirements shall be enforceable requirements of this
23 Decree. Defendants shall not begin or continue the remedial action potentially subject to the
24 additional requirements until Ecology makes its final determination.

1 Ecology shall ensure that notice and opportunity for comment is provided to the public
2 and appropriate agencies prior to establishing the substantive requirements under this section.

3 C. Pursuant to RCW 70.105D.090(2), in the event Ecology determines that the
4 exemption from complying with the procedural requirements of the laws referenced in RCW
5 70.105D.090(1) would result in the loss of approval from a federal agency which is necessary
6 for the State to administer any federal law, the exemption shall not apply and the Defendants
7 shall comply with both the procedural and substantive requirements of the laws referenced in
8 RCW 70.105D.090(1), including any requirements to obtain permits.

9 **XXI. REMEDIAL AND INVESTIGATIVE COSTS**

10 A. The Defendants agrees to pay costs incurred by Ecology pursuant to this
11 Decree. These costs shall include work performed by Ecology or its contractors for, or on, the
12 Site under Ch. 70.105D RCW both prior to and subsequent to the issuance of this Decree for
13 investigations, remedial actions, and Decree preparation, negotiations, oversight and
14 administration. Ecology costs shall include costs of direct activities and support costs of direct
15 activities as defined in WAC 173-340-550(2). The Defendants agree to pay the required
16 amount within ninety (90) days of receiving from Ecology an itemized statement of costs that
17 includes a summary of costs incurred, an identification of involved staff, and the amount of
18 time spent by involved staff members on the project. A general statement of work performed
19 will be provided upon request. Itemized statements shall be prepared quarterly. Failure to pay
20 Ecology's costs within ninety (90) days of receipt of the itemized statement will result in
21 interest charges.

22 B. A prior Cost Recovery balance of \$42,806.66 exists. Repayment of this
23 amount shall be made to Ecology at not less than five thousand (\$5,000) dollars per quarter.
24 This balance shall not be subject to interest if this payment is made within ninety (90) days of
25

1 receipt of the quarterly itemized statement of current charges. If the minimum payment is not
2 made, then the quarterly repayment will be subject to interest charges.

3 **XXII. IMPLEMENTATION OF REMEDIAL ACTION**

4 If Ecology determines that Defendants have failed without good cause to implement the
5 remedial action, Ecology may, after notice to Defendants, perform any or all portions of the
6 remedial action that remain incomplete. If Ecology performs all or portions of the remedial
7 action because of the Defendants' failure to comply with its obligations under this Decree,
8 Defendants shall reimburse Ecology for the costs of doing such work in accordance with
9 Section XXI, provided that Defendants are not obligated under this section to reimburse
10 Ecology for costs incurred for work inconsistent with or beyond the scope of this Decree.

11 **XXIII. FIVE YEAR REVIEW**

12 As remedial action, including ground water monitoring, continues at the Site, the
13 parties agree to review the progress of remedial action at the Site, and to review the data
14 accumulated as a result of site monitoring as often as is necessary and appropriate under the
15 circumstances. At least every five years the parties shall meet to discuss the status of the Site
16 and the need, if any, of further remedial action at the Site. Ecology reserves the right to require
17 further remedial action at the Site under appropriate circumstances. This provision shall
18 remain in effect for the duration of the Decree.

19 **XXIV. PUBLIC PARTICIPATION**

20 Ecology shall maintain the responsibility for public participation at the Site. However,
21 Defendants shall cooperate with Ecology and, if agreed to by Ecology, shall:

22 A. Prepare drafts of public notices and fact sheets at important stages of the
23 remedial action, such as the submission of work plans, Remedial Investigation/Feasibility
24 Study reports and engineering design reports. Ecology will finalize (including editing if
25

1 necessary) and distribute such fact sheets and prepare and distribute public notices of Ecology's
2 presentations and meetings;

3 B. Notify Ecology's project coordinator prior to the preparation of all press releases
4 and fact sheets, and before major meetings with the interested public and local governments.
5 Likewise, Ecology shall notify Defendants prior to the issuance of all press releases and fact
6 sheets, and before major meetings with the interested public and local governments;

7 C. Participate in public presentations on the progress of the remedial action at the
8 Site. Participation may be through attendance at public meetings to assist in answering
9 questions, or as a presenter;

10 D. In cooperation with Ecology, arrange and/or continue information repositories
11 to be located at the Hesseltine Public Library at 14 NW Division St., Wilbur WA and
12 Ecology's Eastern Regional Office at 4601 N. Monroe, Spokane WA. At a minimum, copies
13 of all public notices, fact sheets, and press releases; all quality assured ground water, surface
14 water, soil sediment, and air monitoring data; remedial actions plans, supplemental remedial
15 planning documents, and all other similar documents relating to performance of the remedial
16 action required by this Decree shall be promptly placed in these repositories.

17 **XXV. DURATION OF DECREE**

18 This Decree shall remain in effect and the remedial program described in the Decree
19 shall be maintained and continued until the Defendants have received written notification from
20 Ecology that the requirements of this Decree have been satisfactorily completed.

21 **XXVI. CLAIMS AGAINST THE STATE**

22 Defendants hereby agree that they will not seek to recover any costs accrued in
23 implementing the remedial action required by this Decree from the Washington State
24 Department of Ecology; and further, that the Defendants will make no claim against the State
25

1 | Toxics Control Account or any Local Toxics Control Account for any costs incurred in
2 | implementing this Decree, with the exception of grants and funding from both state and local
3 | toxics accounts. Except as provided above, however, Defendants expressly reserve their right
4 | to seek to recover any costs incurred in implementing this Decree from any other potentially
5 | liable person.

6 | **XXVII. COVENANT NOT TO SUE / REOPENERS**

7 | A. In consideration of the Defendants' compliance with the terms and conditions of
8 | this Decree, Ecology agrees that compliance with this Decree shall stand in lieu of any and all
9 | administrative, legal, and equitable remedies and enforcement actions available to the State
10 | against the Defendants regarding all matters within the scope of this Decree.

11 | B. Reopeners: In the following circumstances, Ecology may exercise its full
12 | legal authority to address releases of hazardous substances at the Site, notwithstanding the
13 | Covenant Not To Sue set forth above:

14 | (1) In the event Defendants fail to comply with the terms and conditions of
15 | this Decree, including all Exhibits, and after written notice of non-compliance, such failure is
16 | not cured by Defendants within thirty (30) days of receipt of notice of non-compliance.

17 | (2) In the event factors not known at the time of entry of this Decree and not
18 | disclosed to Ecology are discovered and such factors present a previously unknown threat to
19 | human health or the environment and are not addressed by the Cleanup Action Plan, attached
20 | hereto as Exhibit B.

21 | (3) Upon Ecology's determination that actions beyond the terms of this
22 | Decree are necessary to abate an emergency or endangerment situation which threatens public
23 | health, welfare, or the environment.

24 | (4) In the event that the results of groundwater monitoring indicate that
25 | cleanup standards are being exceeded.

1 C. Applicability: The Covenant Not To Sue set forth above shall have no
2 applicability whatsoever to:

- 3 (1) Criminal Liability;
- 4 (2) Actions against PLP's who are not parties to this Decree;
- 5 (3) Liability for damages for injury to, destruction of, or loss of natural
6 resources;
- 7 (4) Determinations pursuant to groundwater monitoring that show that
8 cleanup levels are being exceeded.

9 D. Ecology retains all of its legal and equitable rights against all persons except as
10 otherwise provided in this Decree.

11 **XXVIII. CONTRIBUTION PROTECTION**

12 With regard to claims for contribution against the Defendants, the parties intend that the
13 Defendants will obtain protection against claims for contribution for matters addressed in this
14 Decree pursuant to RCW 70.105D.040(4)(d).

15 **XXIX. LAND USE RESTRICTIONS**

16 Because residual concentrations of hazardous substances at the Site will exceed
17 residential cleanup levels following completion of the remedial action, Defendant agrees that a
18 Restrictive Covenant (Exhibit D) shall be recorded with the office of the Lincoln County
19 Auditor within ten (10) days of the completion of the remedial action. The Restrictive
20 Covenant shall restrict future uses of the Site. Defendant will provide Ecology with a copy of
21 the recorded Restrictive Covenant within thirty (30) days of the recording date.

22 **XXX. EFFECTIVE DATE**

23 This Decree is effective upon the date it is entered by the Court.
24
25

1 **XXXI. PUBLIC NOTICE AND WITHDRAWAL OF CONSENT**

2 This Decree has been the subject of public notice and comment under RCW
3 70.105D.040(4)(a). As a result of this process, Ecology has found that this Decree will lead to
4 a more expeditious cleanup of hazardous substances at the Site.

5 If the Court withholds or withdraws its consent to this Decree, it shall be null and void
6 at the option of any party and the accompanying Complaint shall be dismissed without costs
7 and without prejudice. In such an event, no party shall be bound by the requirements of this
8 Decree.

9 STATE OF WASHINGTON
10 DEPARTMENT OF ECOLOGY

 CHRISTINE O. GREGOIRE
 Attorney General

11
12 _____
13 JIM PENDOWSKI
 Program Manager
 Toxics Cleanup Program

 ELLIOTT FURST, WSBA # 12026
 Senior Counsel

14 Date: _____

 Date: _____

15 LINCOLN COUNTY

 ATTORNEY FOR LINCOLN COUNTY

16
17 _____
 CHAIRMAN

 Don Shepherd

18 Title: Board of County Commissioners

19 Date: 9-20-04

 Date: 09-17-04

20
21 DATED this _____ day of _____, 2003.

22
23 _____
24 JUDGE
25 Lincoln County Superior Court

EXHIBIT A. SITE DIAGRAM

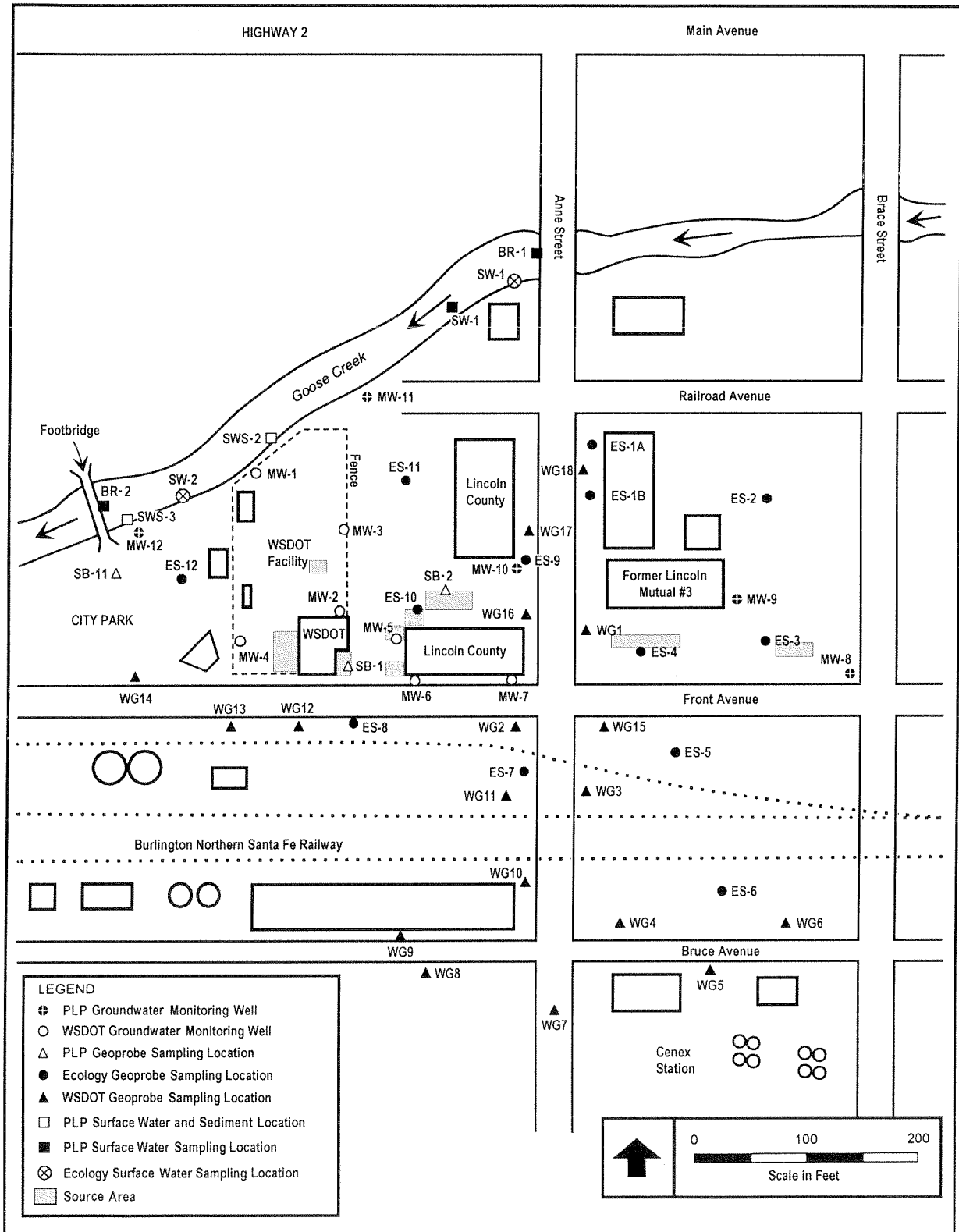
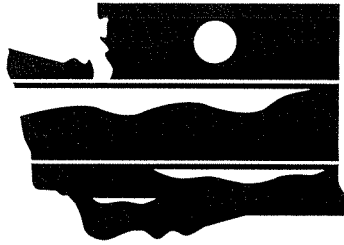


EXHIBIT B. CLEANUP ACTION PLAN



WASHINGTON STATE
DEPARTMENT OF
E C O L O G Y

FINAL CLEANUP ACTION PLAN

South Wilbur Petroleum Contamination Site
Wilbur, WA

May 2003

Washington Department of Ecology
Toxics Cleanup Program
Eastern Regional Office
Spokane, WA

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1.0 INTRODUCTION

This report presents the Washington State Department of Ecology's proposed cleanup action for the South Wilbur Petroleum Contamination Site (Site), located in the area of the intersection of Front Avenue and Anne Street, just south of downtown Wilbur, Lincoln County, Washington (Figure 1). This Cleanup Action Plan (CAP) is required as part of the site cleanup process under the Model Toxics Control Act (MTCA), Ch. 70.105D RCW, implemented by the Washington State Department of Ecology (Ecology). The cleanup action decision is based on the Remedial Investigation/Feasibility Study (RI/FS) and other relevant documents in the administrative record.

This CAP outlines the following:

- The history of operations, ownership, and activities at the Site;
- The nature and extent of contamination as presented in the RI;
- Cleanup levels for the Site that are protective of human health and the environment;
- The selected remedial action for the Site; and
- Any compliance monitoring and institutional controls that are required.

1.1 DECLARATION

Ecology has selected this remedy because it will be protective of human health and the environment. Furthermore, the selected remedy is consistent with the preference of the State of Washington as stated in RCW 70.105D.030(1)(b) for permanent solutions.

1.2 APPLICABILITY

Cleanup levels specified in this cleanup action plan are applicable only to the South Wilbur Petroleum Contamination Site. They were developed as a part of an overall remediation process under Ecology oversight using the authority of MTCA, and should not be considered as setting precedents for other sites.

1.3 ADMINISTRATIVE RECORD

The documents used to make the decisions discussed in this cleanup action plan are on file in the administrative record for the Site. Major documents are listed in the reference section. The entire administrative record for the Site is available for public review by appointment at Ecology's Eastern Regional Office, located at N. 4601 Monroe Street, Spokane, WA 99205-1295.

1.4 PREVIOUS WORK

The CAP presents a brief description and history of the South Wilbur Petroleum Contamination Site. Results from applicable studies and reports are summarized to provide background information pertinent to the CAP. These studies and reports include:

- Final Remedial Investigation/Feasibility Study (CH2MHill, 2002)
- Summary of Environmental Investigations, Washington State Department of Transportation, Old Wilbur Maintenance Facility, Wilbur, Washington (IT Corporation, 2000)
- Site Characterization with Geoprobe for the Washington State Department of Transportation Old Wilbur Maintenance Facility (WSDOT, 1998)
- Additional Site Characterization: Washington State Department of Transportation Old Wilbur Maintenance Facility (WSDOT, 1997)
- Site Characterization: Washington State Department of Transportation Old Wilbur Maintenance Facility (WSDOT, 1997)

2.0 SITE BACKGROUND

2.1 SITE HISTORY

The Site is located approximately one block south of downtown Wilbur, WA in Lincoln County (figure 1). It is comprised of three separate properties: the former Washington State Department of Transportation (WSDOT) Maintenance Facility, the Lincoln County Maintenance Facility, and the former Lincoln Mutual No. 3 fueling station. It is bounded to the north by Goose Creek, to the west by the Town Park, to the south by Front Avenue and a railroad yard, and to the east by Brace Street.

WSDOT operated its maintenance facility from the 1930s through the early 1970s, when major maintenance activities moved to Davenport. Major activities included vehicle maintenance, fueling, and storage of road maintenance supplies. By 1996, all remaining equipment and personnel had been relocated to a different facility, and the Town of Wilbur leased the property for equipment storage. Diesel fuel was stored in one 1,000 gallon underground storage tank (UST) and one 1,100 gallon aboveground storage tank (AST), while gasoline was stored in one 1,000-gallon UST. These tanks were decommissioned and removed in June 1991. An additional 5,000-gallon AST was used for storage of asphalt, and the now empty AST is still present on-site. In addition, a dry well, receiving liquids from a sump in the shop, was located just north of the shop building (CH2MHill, 2002). In 2001, the site was purchased by Lincoln County.

The Lincoln County maintenance facility was in operation from the 1930s through the present. Site activities were similar to the WSDOT facility, including vehicle fueling and maintenance and supply storage. Four USTs were located on the site, including an 8,000 gallon diesel UST, a 500 gallon waste oil UST, and two 500 gallon unleaded gasoline USTs. All of these tanks were decommissioned and removed between 1990 and 1992.

The former Lincoln Mutual No. 3 property was the location of a fueling station, and is estimated from aerial photographs to have operated from the 1950s through the 1980s. The site contained a fueling island, a 1,900 gallon diesel AST, and is inferred from photographs to have had two USTs near the fueling island. Fueling operations were discontinued prior to purchase by the present owners. Currently, the site building is used as office space and the surrounding land is now paved and used for parking. Figure 1 shows the locations of all properties and approximate locations of tanks or petroleum discharges.

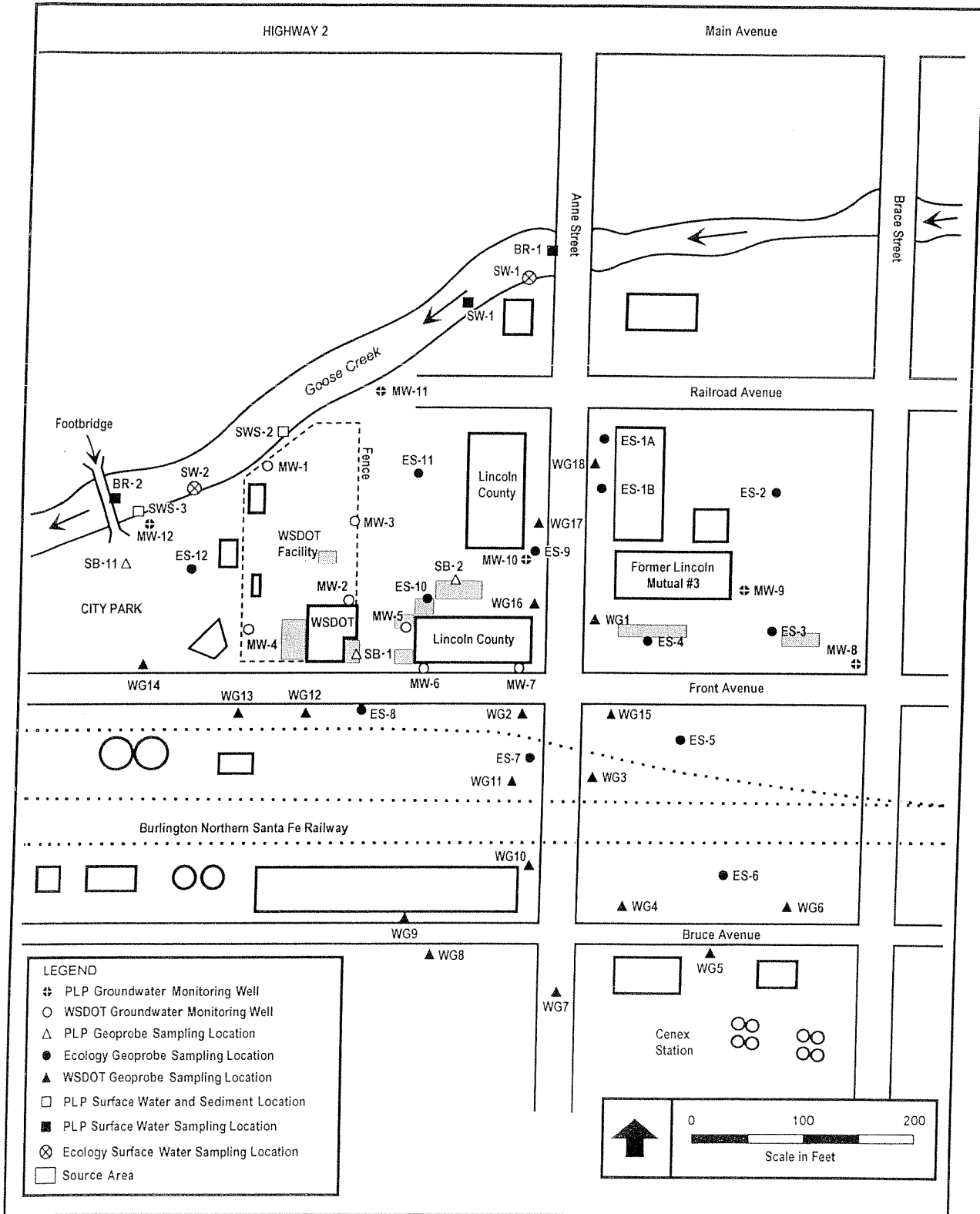


Figure 1. Site Map

2.2 SITE INVESTIGATIONS

A series of investigations have taken place to aid in determining the type, amount, extent, and source of the petroleum hydrocarbon contamination. The following chronologically lists the separate activities and investigations that have taken place at the three properties. Reports documenting these investigations can be found at Ecology's Eastern Regional Office in Spokane.

In 1990, three USTs on the Lincoln County maintenance facility property, two 1000 gallon unleaded gasoline and one 500 gallon waste oil, were decommissioned. It is not known if there were releases related to these tanks. In 1992, the Lincoln County Highway Department removed one 8,000 gallon diesel UST. Soil samples that were collected from the excavation showed that diesel and BTEX compounds were not present above cleanup levels.

The WSDOT property was first investigated in June 1991, when a cleanup action report was submitted for the removal of 5 cubic yards of petroleum contaminated soil. The soil was discovered during the removal of a 1000 gallon gasoline UST and a 1000 gallon diesel UST. It was also noted in a June 1992 WSDOT investigation that a sump in the shop building was full of oily water.

In 1995, the Lincoln County Highway Department completed a limited Phase II Investigation on four Lincoln County maintenance facility properties, including the one in Wilbur. The investigation was intended to investigate potential petroleum contamination related to activities at each facility's wash pad. Results for the Wilbur site showed that adjacent to and just below the asphalt, to a depth of one foot below ground surface, no petroleum contamination was present.

In February 1995, a Phase I and Phase II Environmental Site Assessment was completed for the WSDOT property to determine potential sources and possible extent of contamination at the site. Further activities were conducted to locate the drywell that was connected to the sump, and samples were collected to determine the nature of the contaminants. The drywell was excavated in October of 1996 and the majority of contaminated soil was removed, however gasoline contamination was still present in the bottom and north wall of the excavation.

In July 1996, the WSDOT performed a soil and groundwater investigation based on the results of the Phase I and II site assessment. Four monitoring wells were installed on-site to assess the quality of subsurface materials. Soil and groundwater samples were collected, and results indicated that soil was contaminated with gasoline to a depth of around 15 feet, and groundwater had concentrations of gasoline, and benzene, toluene, ethyl-benzene, and xylene (BTEX) exceeding cleanup levels.

Because of the nature of surrounding businesses, the WSDOT completed a second site characterization in May 1997 to investigate the extent of petroleum contamination. Three additional monitoring wells were installed on the Lincoln County maintenance facility property, and soil and groundwater samples were again collected. Results showed soil exceedances for gasoline, benzene, and xylene. Groundwater again showed levels of gasoline and BTEX compounds exceeding cleanup levels, and additionally diesel had one exceedance.

A third investigation was undertaken by WSDOT because the plume appeared to be larger than originally thought. A geoprobe was used to investigate areas upgradient of both properties. Groundwater and soil results again showed soil contaminated with gasoline and xylene, and groundwater contaminated with gasoline, benzene, toluene, and xylene. Areas shown to be impacted were located to the southeast and east of the site.

In 1999, Ecology completed a limited site investigation of the WSDOT property, the Lincoln County property, and the former Lincoln Mutual #3 property which lies upgradient of the two maintenance facilities. A strataprobe was used to install several soil borings surrounding the WSDOT property, with the majority being installed upgradient of both maintenance facilities to help characterize other potential sources. Soil sampling showed that gasoline contamination was present at depths greater than 8 feet. Groundwater samples had concentrations of gasoline, diesel, and BTEX compounds in various combinations exceeding cleanup levels.

A Remedial Investigation/Feasibility Study (RI/FS) was completed in 2001 by consultants to Lincoln County. The RI/FS further evaluated the nature and extent of soil and groundwater contamination at all three properties comprising the site. Samples were taken primarily from the three properties and areas immediately adjacent to the properties. Eight soil borings were installed, and soil samples were taken from several depths in these borings. Five of the eight borings were completed as temporary monitoring wells, and representative groundwater samples were taken. In addition, three surface water samples were collected from Goose Creek at locations bordering the site.

2.3 PHYSICAL SITE CHARACTERISTICS

2.3.1 Topography and Climate

The site is at an elevation of around 2150 feet and is relatively flat, with little elevation change from the northern site boundary to several blocks south of the site. Beyond that, the elevation changes rapidly, gaining 40 feet in elevation over a 200 foot distance. This embankment represents a division from the industrial/commercial area along the creek to the more residential area to the south. The creek itself runs in a ravine about 10 feet below site elevation.

The region is semi-arid, receiving between 10 and 15 inches of precipitation annually. The majority of the precipitation occurs in winter and early spring in the form of snow. The annual mean temperature is about 50°F.

2.3.2 Regional Geology

The geology in the vicinity of the site consists of Wanapum Basalt, a subgroup of the Columbia River Basalt. It ranges from 200 to 400 feet in thickness and is Miocene in age. (CH2MHill, 2002) In the vicinity of the site, they are approximately 200 feet thick. These basalts are overlain by variable thicknesses of alluvium and/or loess.

2.3.3 Hydrogeology

The main groundwater producing unit is the Wanapum Basalt, where groundwater flows through joints, fractures, and interflows. Local water supply wells receive water from this unit, and flow is artesian in many places. Overlying the basalt in the vicinity of the site is a unit of saturated silts and clays. These materials have a higher permeability than the basalt below, but still are relatively impermeable compared to other unconsolidated aquifer materials. The range of hydraulic conductivities is estimated to be 3×10^{-4} ft/s to 1.5×10^{-4} ft/s. These correspond roughly to that of a silty sand. Groundwater in the shallow aquifer is not considered a source of drinking water because of its low hydraulic conductivity and low water quality. Hydraulic gradient at the site is fairly shallow, having been measured at approximately 0.004 ft/ft. Groundwater flows generally towards Goose Creek, with some slight variation in the angle depending on the season. In times of extremely high water in the creek, the flow can decrease significantly or even temporarily reverse such that water from Goose Creek recharges the groundwater system.

3.0 NATURE AND EXTENT OF CONTAMINATION

3.1 SOIL

Soil has been contaminated with petroleum compounds down to bedrock at all three properties. It is unknown exactly how much soil on each property is affected. Originally, petroleum contamination was located very near to the source of the release. Due to the low conductivity of the soils, movement occurred quite slowly. Precipitation infiltration caused petroleum contamination to move and spread, causing more soil to become contaminated and eventually contaminating groundwater. Over time, numerous releases from different facilities moved, spread, and overlapped, resulting in a plume of contaminated soil that varies in concentration and extent. Because soil contamination investigations only take samples at specific locations within the plume, it is difficult to estimate the exact size and nature of the plume.

Soil investigations have shown maximum gasoline concentrations at several thousand parts per million (ppm), maximum diesel at 6500 ppm, and concentrations of the petroleum components benzene, toluene, ethyl benzene, and xylene (BTEX) all significantly exceeding cleanup levels. Soil was analyzed for lead since the facilities were in operation during the time when leaded gasoline could have been used. However, soil results did not show the presence of lead.

3.2 GROUNDWATER

Groundwater has been contaminated by petroleum compounds from releases at all three facilities. Petroleum releases from underground storage tanks and other surface disposal have migrated down through the soil column and into groundwater. Groundwater plumes from releases at all three facilities moved and mixed into one commingled plume. Due to the nature of groundwater, more mixing occurs so contaminant concentrations are slightly more evenly dispersed than in soil.

Groundwater investigations have focused on measuring the areal extent of the plume and the nature of the contamination. Historical data is available from the seven wells on the WSDOT

and Lincoln County properties, and recent data is from all twelve monitoring wells on the site. Gasoline concentrations were over 100 ppm, diesel concentrations were almost 2000 ppm, and BTEX compounds were all well in exceedance of groundwater cleanup standards. Lead was again tested because of the possible presence of leaded gasoline, but none was detected in any groundwater samples.

3.3 SURFACE WATER AND SEDIMENT

Goose Creek flows immediately adjacent to two of the three properties that comprise the site. The primary source of water for the creek is precipitation and surface runoff. Also, the shallow groundwater system supplies base flow to Goose Creek throughout most of the year. Flow is typically highest in the spring after snowmelt, and lowest in late summer.

Surface water has been tested twice during investigations at this site, once by Ecology and once during the RI/FS. During the study by Ecology, two locations were sampled, one upstream and one downstream of the site. The RI/FS sampled five locations along the creek, two upstream and three downstream. Two of those sites also had sediment samples collected from them. Sediment samples were collected from the bank adjacent to the site. Results of both investigations showed no detections of gasoline, diesel, or BTEX compounds in surface water or sediment. Therefore, there are no indicators or cleanup levels set for surface water or sediment.

3.4 RISKS TO HUMAN HEALTH AND THE ENVIRONMENT

The Site is composed of commercial-use properties with no anticipated future change of use. However, the WSDOT property is immediately adjacent to the city park which is host to numerous community activities including an annual fishing derby for children. Site groundwater discharges into Goose Creek. Although it is a Class B stream and is not considered a source of potable drinking water, it still has limited recreational and irrigation use. Also, the Lincoln County and Lincoln Mutual #3 properties are unfenced and open to passersby.

Exposures to human populations could occur through contact with contaminated surface or subsurface soils, groundwater, or surface water. These populations include on-site workers, passersby to the properties, and recreational users of the park and creek.

4.0 CLEANUP STANDARDS

MTCA requires the establishment of cleanup standards for individual sites. The two primary components of cleanup standards are cleanup levels and points of compliance. Cleanup levels determine the concentration at which a substance does not threaten human health or the environment. All media that exceeds a cleanup level is addressed through a remedy that prevents exposure to the media. Points of compliance represent the locations on the site where cleanup levels must be met.

4.1 OVERVIEW

The process for establishing cleanup levels involves the following:

- determining which method to use;
- developing cleanup levels for individual contaminants in each media;
- determining which contaminants contribute the majority of the overall risk (indicators) in each media; and
- adjusting the cleanup levels downward based on total site risk.

The MTCA Cleanup Regulation provides three options for establishing cleanup levels: Methods A, B, and C.

- Method A may be used to establish cleanup levels at routine sites or sites with relatively few hazardous substances.
- Method B is the standard method for establishing cleanup levels and may be used to establish cleanup levels at any site.
- Method C is a conditional method used when a cleanup level under Method A or B is technically impossible to achieve or may cause significantly greater environmental harm. Method C also may be applied to qualifying industrial properties.

The MTCA Cleanup Regulation defines the factors used to determine whether a substance should be retained as an indicator for the Site. When defining cleanup levels at a site contaminated with several hazardous substances, Ecology may eliminate from consideration those contaminants that contribute a small percentage of the overall threat to human health and the environment. WAC 173-340-703(2) provides that a substance may be eliminated from further consideration based on:

- The toxicological characteristics of the substance which govern its ability to adversely affect human health or the environment relative to the concentration of the hazardous substance;
- The chemical and physical characteristics of the substance which govern its tendency to persist in the environment and through the environment;
- The chemical and physical characteristics of the substance which govern its tendency to move into and through the environment;
- The natural background concentration of the substance;
- The concentration of the substance at the site;
- The frequency of detection.

4.2 SITE CLEANUP LEVELS

The RI/FS has documented the presence of contamination in groundwater and soil at the Site. Cleanup levels will be developed for these media. Since the groundwater is nonpotable, these cleanup levels are established under the criteria of WAC 173-340-720(6).

Under WAC 173-340-704(1), Method A may be used at a site that is undergoing a routine cleanup action. Since the site has a relatively small number of contaminants with obvious cleanup levels and no environmental impact statement or ecological evaluation is required, Method A cleanup levels will be used at the site.

Tables 1 and 2 show the indicator substance screening of analytes for which Site soil and groundwater were tested.

4.3 POINT OF COMPLIANCE

The MTCA Cleanup Regulation defines the point of compliance as the point or points where cleanup levels shall be attained. Once cleanup levels are met at the point of compliance, the Site is no longer considered a threat to human health or the environment.

The point of compliance for groundwater is defined in WAC 173-340-720(8). Groundwater points of compliance are established for the entire Site from the top of the saturated zone to the lowest affected portion of the aquifer, which is bedrock at this Site. At this Site, it is practicable to meet cleanup levels using a standard point of compliance.

WAC 173-340-740(6) gives the point of compliance requirements for soil. For sites where cleanup levels are based on the protection of groundwater, the point of compliance is established in all soils throughout the site. The Method A cleanup levels for petroleum and BTEX compounds are based on the protection of groundwater, so this point of compliance will apply.

5.0 CLEANUP ACTION SELECTION

5.1 REMEDIAL ACTION OBJECTIVES

The remedial action objectives are statements describing the actions necessary to protect human health and the environment through eliminating, reducing, or otherwise controlling risks posed through each exposure pathway and migration route. They are developed considering the characteristics of the contaminated medium, the characteristics of the hazardous substances present, migration and exposure pathways, and potential receptor points.

Groundwater and soil have been contaminated by the former Site activities. People may be exposed to contaminated groundwater via ingestion, inhalation of volatile chemicals, or dermal contact. Soil exposure would occur through dermal contact or inhalation of dust. Potential populations include on-site workers, trespassers, residents of nearby neighborhoods, passersby, and off-site workers.

Given these potential exposure pathways, the following are the remedial action objectives for the Site:

- Prevent or minimize direct contact or ingestion of contaminated soil by humans
- Prevent or minimize direct contact or ingestion of contaminated groundwater by humans
- Prevent or minimize further contamination of groundwater
- Protect beneficial uses of Goose Creek

Analyte	PQLs, mg/kg	Frequency of Detection	Maximum Concentration, mg/kg	Method A Concentration, mg/kg		Screening Result
TPH-gasoline	6	0.51	3340	30		indicator
TPH-diesel	30	0.11	6500	2000		indicator
Benzene	0.00008	0.15	9.8	0.03		indicator
Toluene	0.00015	0.21	110	7		indicator
Ethyl benzene	0.00015	0.38	30	6		indicator
Xylene	0.00015	0.36	190	9		indicator
Lead	20	0.05	140	250		below cleanup level
PQL - practical quantitation limit for appropriate method						
mg/kg - milligrams per kilogram						

Table 1. Indicator Substance Screening, Soil

Analyte	PQLs, µg/L	Frequency of Detection	Maximum Concentration, µg/L	Method A Concentration, µg/L		Screening Result
				Groundwater	Surface Water ¹	
TPH-gasoline	0.05	0.80	110,000	800		indicator
TPH-diesel	0.25	0.34	1,900,000	500		indicator
Benzene	0.5	0.76	2400	5	71	indicator
Toluene	1.0	0.73	2800	1000	200,000	indicator
Ethyl benzene	1.0	0.76	200,000	700	29,000	indicator
Xylene	1.0	0.78	17,500	1000		indicator
Lead	0.002	0.11	3	15	2.52²	below cleanup level ³
PQL - practical quantitation limit for appropriate method						
µg/L - micrograms per liter						
bold - selected cleanup level						
¹ - surface water levels based on National Toxics Rule values for Human Health for Consumption of Organism Only						
² - concentration dependant on hardness (100 mg/L estimated here)						
³ - maximum concentration does not significantly exceed Method A cleanup level						

Table 2. Indicator Substance Screening, Groundwater

5.2 CLEANUP ACTION ALTERNATIVES

Cleanup alternatives to meet these remedial action objectives are evaluated as part of the RI/FS for the site. The feasibility study evaluated four options for soil (excavation, onsite treatment, containment, and offsite disposal) and two options for groundwater (interception and treatment). These options were combined to form four alternatives for addressing all contaminated media at the site. The following four alternatives are as proposed by Lincoln County.

5.2.1 Alternative 1: No Action

The no action alternative is a baseline to address the criteria for comparison to action alternatives. This represents the site with no active measures towards site cleanup. This alternative would include fencing around all properties, institutional controls including deed restrictions, and natural attenuation. Fencing and signs on properties would need to be continuously maintained, and groundwater monitoring would take place to assess the effectiveness of natural attenuation.

5.2.2 Alternative 2: Source Removal with Natural Attenuation

This alternative would primarily address soil with no engineered treatment of groundwater. Contaminated soil in the source areas would be excavated and backfilled with clean material, while groundwater would only be addressed through natural attenuation. Excavated soil would either be transported to a permitted disposal facility, or would be transported to an appropriate off-site location to be land treated. Land treatment involves the addition of oxygen, nutrients, and moisture and manually aerating to remove volatile contaminants. The baseline no action alternative measures would also be included, such as fencing, institutional controls, and groundwater monitoring.

5.2.3 Alternative 3: Source Removal with Engineering Controls

Groundwater, along with soil, would be more actively addressed through this alternative. Contaminated soil in source areas would be excavated and backfilled with clean material, as in alternative two. In addition, measures would be taken to prevent the infiltration of water through soils and thereby minimize the leaching and mobilization of contaminants into groundwater. These measures would include an impermeable barrier over areas where soil was excavated, with a means to control and divert stormwater. A phytoremediation barrier would be planted along the north and west sides of the site to assist the natural attenuation processes in groundwater that would be considered a component of the alternative. Fencing, institutional controls, and groundwater monitoring would still be a component of this alternative.

5.2.4 Alternative 4: Source Removal with Engineering Controls and Enhanced Bioremediation

This alternative addresses both contaminated media at the site. Contaminated soil in source areas would be excavated and backfilled with clean material as in the previous alternatives. However, in this alternative the clean backfill is mixed with an oxygen-releasing compound to enhance the biological degradation of the contaminants. Installation of an impermeable barrier

over the surface and a phytoremediation barrier would also be included, as would institutional controls and groundwater monitoring.

5.3 REGULATORY REQUIREMENTS

The MTCA Cleanup Regulation sets forth the minimum requirements and procedures for selecting a cleanup action. A cleanup action must meet each of the minimum requirements specified in WAC 173-340-360(2), including certain threshold and other requirements. These requirements are outlined below.

5.3.1 Threshold Requirements

WAC 173-340-360(2)(a) requires that the cleanup action shall:

- Protect human health and the environment;
- Comply with cleanup standards (see Section 4.0);
- Comply with applicable state and federal laws (see Section 5.3.5); and
- Provide for compliance monitoring.

5.3.2 Other Requirements

In addition, WAC 173-340-360(2)(b) states that the cleanup action shall:

- Use permanent solutions to the maximum extent practicable;
- Provide for a reasonable restoration time frame; and
- Consider public concerns

WAC 173-340-360(3) describes the specific requirements and procedures for determining whether a cleanup action uses permanent solutions to the maximum extent practicable. A permanent solution is defined as one where cleanup levels can be met without further action being required at the Site other than the disposal of residue from the treatment of hazardous substances. To determine whether a cleanup action uses permanent solutions to the maximum extent practicable, a disproportionate cost analysis is conducted. This analysis compares the costs and benefits of the cleanup action alternatives and involves the consideration of several factors, including:

- Protectiveness;
- Permanent reduction of toxicity, mobility and volume;
- Cost;
- Long-term effectiveness;
- Short-term effectiveness;
- Implementability; and
- Consideration of public concerns.

The comparison of benefits and costs may be quantitative, but will often be qualitative and require the use of best professional judgment.

WAC 173-340-360(4) describes the specific requirements and procedures for determining whether a cleanup action provides for a reasonable restoration time frame.

5.3.3 Groundwater Cleanup Action Requirements

At sites with contaminated groundwater, WAC 173-340-360(2)(c) requires that the cleanup action meet certain additional requirements. For nonpermanent groundwater cleanup actions, the regulation requires that the following two requirements be met:

- 1) Treatment or removal of the source of the release shall be conducted for liquid wastes, areas of high contamination, areas of highly mobile contaminants, or substances that can't be reliably contained; and
- 2) Groundwater containment (such as barriers) or control (such as pumping) shall be implemented to the maximum extent practicable.

5.3.4 Cleanup Action Expectations

WAC 173-340-370 sets forth the following expectations for the development of cleanup action alternatives and the selection of cleanup actions. These expectations represent the types of cleanup actions Ecology considers likely results of the remedy selection process; however, Ecology recognizes that there may be some sites where cleanup actions conforming to these expectations are not appropriate.

- Treatment technologies will be emphasized at sites with liquid wastes, areas with high concentrations of hazardous substances, or with highly mobile and/or highly treatable contaminants;
- To minimize the need for long-term management of contaminated materials, hazardous substances will be destroyed, detoxified, and/or removed to concentrations below cleanup levels throughout sites with small volumes of hazardous substances;
- Engineering controls, such as containment, may need to be used at sites with large volumes of materials with relatively low levels of hazardous substances where treatment is impracticable;
- To minimize the potential for migration of hazardous substances, active measures will be taken to prevent precipitation and runoff from coming into contact with contaminated soils or waste materials;
- When hazardous substances remain on-site at concentrations which exceed cleanup levels, they will be consolidated to the maximum extent practicable where needed to minimize the potential for direct contact and migration of hazardous substances;
- For sites adjacent to surface water, active measures will be taken to prevent/minimize releases to that water; dilution will not be the sole method for demonstrating compliance;
- Natural attenuation of hazardous substances may be appropriate at sites under certain specified conditions (see WAC 173-340-370(7)); and
- Cleanup actions will not result in a significantly greater overall threat to human health and the environment than other alternatives.

5.3.5 Applicable, Relevant, and Appropriate, and Local Requirements

WAC 173-340-710(1) requires that all cleanup actions comply with all applicable state and federal law. It further states that the term “applicable state and federal laws” shall include legally applicable requirements and those requirements that the department determines “...are relevant and appropriate requirements.” This section discusses applicable state and federal law, relevant and appropriate requirements, and local permitting requirements which were considered and were of primary importance in selecting cleanup requirements. If other requirements are identified at a later date, they will be applied to the cleanup actions at that time.

MTCA provides an exemption from the procedural requirements of several state laws and from any laws authorizing local government permits or approvals for remedial actions conducted under a consent decree, order, or agreed order. [RCW 70.105D.090] However, the substantive requirements of a required permit must be met. The procedural requirements of the following state laws are exempted:

- Ch. 70.94 RCW, Washington Clean Air Act;
- Ch. 70.95 RCW, Solid Waste Management, Reduction, and Recycling;
- Ch. 70.105 RCW, Hazardous Waste Management;
- Ch. 75.20 RCW, Construction Projects in State Waters;
- Ch. 90.48 RCW, Water Pollution Control; and
- Ch. 90.58 RCW, Shoreline Management Act of 1971.

WAC 173-340-710(4) sets forth the criteria that Ecology evaluates when determining whether certain requirements are relevant and appropriate for a cleanup action. Table 3 lists the state and federal laws that contain the applicable or relevant and appropriate requirements that apply to the cleanup action at the South Wilbur Petroleum Contamination Site. Local laws, which may be more stringent than specified state and federal laws, will govern where applicable.

5.3.6 Terrestrial Ecological Evaluation

As soil is an affected media at the site, the cleanup action must go through a terrestrial ecological evaluation. The terrestrial ecological evaluation process set forth in MTCA is used to determine whether the cleanup action is protective of the environment. The requirements and procedures for conducting a terrestrial ecological evaluation are set forth in WAC 173-340-7490 through WAC 173-340-7494. If a site meets one of the following four criteria, it may be excluded from evaluation:

- All contaminated soil is or will be located below the point of compliance;
- All contaminated soil is or will be covered by buildings, paved surfaces, or other physical barriers;
- There is less than 1.5 acres of undeveloped land on the site or within 500 feet of the site (1/4 acre if specific contaminants are present); or
- Concentrations of hazardous substances in soil do not exceed natural background levels.

At this site, all contaminated soil in source areas will be excavated unless it is under a building. Therefore, the first exclusion will be met and no terrestrial ecological evaluation will be done.

Cleanup Action Implementation	
Ch. 18.104 RCW; Ch. 173-160 WAC	Water Well Construction; Minimum Standards for Construction and Maintenance of Water Wells
Ch. 173-162 WAC	Rules and Regulations Governing the Licensing of Well Contractors and Operators
Ch. 70.105D RCW; Ch. 173-340 WAC	Model Toxics Control Act; MTCA Cleanup Regulation
Ch. 43.21C RCW; Ch. 197-11 WAC	State Environmental Policy Act; SEPA Rules
29 CFR 1910	Occupational Safety and Health Act
Groundwater and Surface Water	
42 USC 300	Safe Drinking Water Act
33 USC 1251; 40 CFR 131; Ch. 173-201A WAC	Clean Water Act of 1977; Water Quality Standards
Ch. 70.105D RCW; Ch. 173-340 WAC	Model Toxics Control Act; MTCA Cleanup Regulation
40 CFR 141; 40 CFR 143	National Primary Drinking Water Standards; National Secondary Drinking Water Standards
Ch. 246-290 WAC	Department of Health Standards for Public Water Supplies
Ch. 173-154 WAC	Protection of Upper Aquifer Zones
Air	
42 USC 7401; 40 CFR 50	Clean Air Act of 1977; National Ambient Air Quality Standards
Ch. 70.94 RCW; Ch. 43.21A RCW; Ch. 173-400 WAC	Washington Clean Air Act; General Regulations for Air Pollution
Ch. 173-460 WAC	Controls for New Sources of Air Pollution
Ch. 173-470 WAC	Ambient Air Quality Standards for Particulate Matter
SCAPCA Regulation 1 Article VI	Control of Fugitive Emissions
Ch. 70.105D RCW; Ch. 173-340 WAC	Model Toxics Control Act; MTCA Cleanup Regulation
40 CFR Part 28	Criteria for Municipal Solid Waste Landfills

Table 3. Applicable or Relevant and Appropriate Requirements for the Cleanup Action

5.4 EVALUATION OF CLEANUP ACTION ALTERNATIVES

The requirements and criteria outlined in Section 5.3 are used to conduct a comparative evaluation of alternatives one through four and to select a cleanup action from those alternatives. Table 4 provides a summary of the ranking of the alternatives against the various criteria.

Criteria	Alternative 1	Alternative 2	Alternative 3	Alternative 4
<i>Threshold Criteria</i>				
Protection of Health & Environment	No	Yes	Yes	Yes
Compliance with Cleanup Standards	No	Yes	Yes	Yes
Compliance with State & Federal Laws	No	Yes	Yes	Yes
Provision for Compliance Monitoring	No	Yes	Yes	Yes
<i>Other Requirements</i>				
Use of Permanent Solutions (disproportionate cost analysis)	Ranks 4	Ranks 3	Ranks 2	Ranks 1
Protectiveness	Low	Medium	Med-High	High
Permanent Reduction	Low	Medium	Medium	Medium
Cleanup Cost (estimated)	\$365,000	\$244,000	\$289,000	\$216,000
Long-term Effectiveness	Low	Medium	Medium	Medium
Short-term Effectiveness	High	Medium	Medium	Medium
Implementability	Yes	Yes	Yes	Yes
Consider Public Concerns	Yes	Yes	Yes	Yes
Provide Reasonable Time Frame	No	Yes	Yes	Yes
Consider Public Comments	Yes	Yes	Yes	Yes

Table 4. Evaluation of Cleanup Action Alternatives

5.4.1 Threshold Requirements

5.4.1.1 Protection of Human Health and the Environment

Alternative 1 provides no additional protection to human health and the environment, and allows for contaminated soil to remain on-site and continue leaching contaminants to groundwater. Alternative 2 would eliminate the risk due to contaminated soil by removing the direct contact pathway, the inhalation pathway, and the source for leaching to groundwater. Alternative 3 would provide additional protection from dermal and inhalation pathways, and would inhibit contaminant mobilization by reducing precipitation infiltration. Alternative 4 would provide the highest level of protection by enhancing the removal of residual groundwater contamination.

5.4.1.2 Compliance with Cleanup Standards

Alternative 1 would likely not meet cleanup standards in either soil or groundwater. Alternative 2 would involve the excavation of all soils exceeding cleanup levels, so soil levels will be met.

Groundwater levels would take time to achieve as no active measures would be implemented to remediate groundwater. Alternatives 3 and 4 would also achieve soil and groundwater cleanup levels as would alternative 2, but groundwater levels would be met in shorter time frames.

5.4.1.3 Compliance with State and Federal Laws

Alternative 1 would not be in compliance with state and federal laws because MTCA cleanup levels in groundwater and soil would continue to be exceeded. Alternatives 2, 3, and 4 would all achieve cleanup levels but over varying time frames.

5.4.1.4 Provision for Compliance Monitoring

Compliance monitoring would not take place under alternative 1. Alternatives 2, 3, and 4 would have compliance monitoring plans as part of the remedial action, and therefore would meet this criteria.

5.4.2 Other Requirements

5.4.2.1 Use of Permanent Solutions to the Maximum Extent Practicable

As discussed previously, to determine whether a cleanup action uses permanent solutions to the maximum extent practicable, the disproportionate cost analysis specified in the regulation is used. The analysis compares the costs and benefits of the cleanup action alternatives and involves the consideration of several factors. The comparison of costs and benefits may be quantitative, but will often be qualitative and require the use of best professional judgment.

Costs are disproportionate to the benefits if the incremental costs are disproportionate to the incremental benefits. Based on the analysis described below, it has been determined that alternative 4 has the highest ranking for use of a permanent solution to the maximum extent practicable, followed by alternatives 2, 3, and 1. Alternatives 2 and 3 are relatively equal, and in such cases the alternative with the lower cost ranks higher. However, alternative 4 is higher in ranking than all the others.

▪ Protectiveness

Alternative 1 would not provide any protection to the public from existing soil and groundwater contamination, as it would not mitigate any exposure nor reduce contaminant levels to below cleanup levels. Alternatives 2, 3, and 4 would all be protective.

▪ Permanent Reduction of Toxicity, Mobility and Volume

Alternative 1 would not cause a permanent reduction of the toxicity, mobility, and volume of contaminants at the site. Alternatives 2, 3, and 4 would all involve the removal of all soil exceeding the cleanup level, and as such would result in a permanent solution. Contaminants in groundwater in these three alternatives would also be permanently reduced in volume, toxicity, and mobility.

- Cleanup Costs

Costs are approximated based on a fate and transport model that was run to estimate the remediation time for each alternative. Costs for each task included in each alternative are accumulated for the estimated length of time from the model.

Activities involved in alternative 1 include the installation of signs and fencing, and the continuation of groundwater monitoring to track contaminant levels. Modeling has shown that with no soil or groundwater treatment, it would take at least 27 years or more to achieve cleanup levels. Costs would exceed \$480,000 to implement institutional controls and monitor the site.

Alternative 2 would include institutional controls, plus the additional cost of soil excavation and groundwater monitoring. Because the source would be removed during excavation, modeling has shown that the time to achieve cleanup levels would be approximately 9 years. Therefore, total costs are estimated at \$244,000 which includes excavation and nine years of groundwater monitoring.

The same costs as alternative 2 would be included in alternative 3, with the addition of surface capping, surface water controls, and plants. With these additional measures, the total cost of alternative 3 is estimated to be \$289,000.

Alternative 4 would include the same measures as alternative 3, but would involve the addition of the oxygen-releasing compound with the clean backfill. Modeling shows that this should reduce the time to achieve cleanup levels from 9 years to 3 years. So the additional cost of the oxygen-releasing compound should be offset by the reduction in monitoring costs. Estimated total costs for this alternative are \$216,000.

- Long-Term Effectiveness

Alternative 1 would not be effective in the long-term as contaminated soil and groundwater would not be reduced in a reasonable time frame, and risks to human health and the environment would not be mitigated.

Alternatives 2, 3, and 4 would all provide a similar level of long-term effectiveness. The primary difference is in the time required to achieve cleanup levels, which would be least for alternative 4 and most with alternative 2.

- Short-Term Effectiveness

Alternative 1 would be effective in the short-term because no additional risks would be introduced by its implementation. Alternatives 2 through 4 would introduce minor risks by the excavation and handling of contaminated soil. However, these risks would be effectively managed through standard operating procedures, minimizing handling of contaminated soil, and by keeping soil containerized during storage and transport.

- Implementability

All four alternatives are implementable at the Site. In the case of alternative 1, no action would be taken and institutional controls would be easily set up. For alternatives 2 through 4, actions that would be taken are excavation, backfilling, paving, fencing, and institutional controls, all of which are implementable based on site conditions. Paving and fencing would be limited by existing structures which would not be removed for this work.

- Consider Public Concerns

All four alternatives would provide opportunity for members of the public to review and comment on any proposals or plans.

5.4.2.2 *Provide a Reasonable Restoration Time Frame*

WAC 173-340-360(4) describes the specific requirements and procedures for determining whether a cleanup action provides for a reasonable restoration time frame, as required under subsection (2)(b)(ii). The factors that are used to determine whether a cleanup action provides a reasonable restoration time frame are set forth in WAC 173-340-360(4)(b).

Based on fate and transport modeling, alternative 1 would require a minimum of 27 years to achieve cleanup levels in soil and groundwater. The assumptions are that the areas of soil contamination are not expected to increase, i.e., there will be no new releases, the hydraulic conditions will not significantly change, that there is currently an equilibrium between soil and groundwater contamination, and that active biological degradation is occurring. This would not be considered a reasonable restoration time frame.

Using the same assumptions as alternative 1, alternative 2 is expected to meet cleanup levels in soil and groundwater within 9 years. Alternative 3 would likely achieve cleanup levels in a slightly faster time frame, but because of the uncertainties in the fate and transport model, the restoration time frame is estimated to also be 9 years. These two alternatives are considered to have a reasonable restoration time frame.

Alternative 4 would enhance the restoration time frame due to the addition of oxygen to the groundwater system causing increased biological degradation of contaminants. It is expected to result in the achievement of cleanup levels within an estimated 3 years. This is considered to be a reasonable restoration time frame.

5.4.3 Groundwater Cleanup Action Requirements

Cleanup actions that address groundwater must meet the specific requirements described in Section 5.3.3 in addition to those listed above. At this Site, groundwater will be actively addressed through treatment with an oxygen-releasing compound. No other groundwater treatment technologies, such as pump and treat or air sparging, are considered feasible at this Site due to Site conditions. Once an oxygen-releasing compound is added to the soil, it is expected that no further action will be required to achieve cleanup levels in groundwater. Therefore, it is

Ecology's determination that this technology represents a permanent solution for groundwater cleanup, to the maximum extent practicable at the Site.

5.4.4 Terrestrial Ecological Evaluation

As noted above, alternatives 1 through 3 are considered protective of the environment. This determination is based on a terrestrial ecological evaluation conducted under the procedures specified in the regulation. Under the terrestrial ecological evaluation process, no further evaluation is required if Ecology determines that a site meets one of the four criteria listed in Section 5.3.6.

Under alternatives 2 through 4, contaminated soil would be excavated. Ecology has determined that since all soil contaminated with hazardous substances will be removed from the Site, the potential for exposure to plants or wildlife will be eliminated.

5.4.5 Cleanup Action Expectations

Specific expectations of cleanup levels are outlined in WAC 173-340-370 and are described in Section 5.3.4. Among those, alternatives 2 through 4 would address these expectations in the following manner:

- The use of an oxygen-releasing compound will provide treatment of discrete areas of hazardous substances.
- Hazardous substances will be removed through soil excavation.
- The installation of an asphalt cap and stormwater controls will prevent contact with contaminated materials.
- Treatment of contaminated groundwater with an oxygen-releasing compound and the installation of a phytoremediation barrier will minimize any discharge of contaminated groundwater to surface water in excess of cleanup levels.
- At this Site, there is evidence that natural attenuation is occurring, the source will be removed through soil excavation, compliance monitoring will be conducted to monitor the cleanup action, and the presence of residual contamination in groundwater should not present an unacceptable risk.

5.5 DECISION

Based on the analysis described above, alternative 4 has been selected as the proposed remedial action for the South Wilbur Petroleum Contamination Site. The alternative meets each of the minimum requirements for remedial actions.

Alternative 4 meets each of the threshold requirements. Furthermore, alternative 4 uses permanent solutions to the maximum extent practicable. The cost of alternative 4 is less than alternatives 1 through 3 and provides a higher level of protection for human health and the environment. Alternative 4 also provides a reasonable restoration time frame.

6.0 PROPOSED REMEDIAL ACTION

The proposed cleanup action for the Site includes the excavation of soils that are contaminated with petroleum hydrocarbons at concentrations above cleanup levels, and backfilling with clean soils and an oxygen-releasing compound. Excavated soils will either be transported to a permitted disposal facility, or will be transported to an appropriate off-site location to be land treated. Engineering controls in the form of asphalt paving, stormwater controls, and a phytoremediation barrier on the north and west sides of the site, will be installed to minimize contaminant migration in groundwater. In addition to these cleanup actions, groundwater monitoring will be required to ensure that reductions in groundwater contaminant concentrations are occurring. Institutional controls will also be required as long as cleanup levels have not been achieved.

6.1 GROUNDWATER MONITORING

Groundwater monitoring will include the quarterly sampling of all twelve monitoring wells for all groundwater indicators. Groundwater monitoring shall continue until cleanup levels are achieved. In addition, dissolved oxygen will be measured on at least a quarterly basis to help determine the effectiveness of the oxygen-releasing compound. If any wells need to be removed to complete the cleanup action, or if any wells are determined to be compromised due to the cleanup action, then they shall not be sampled and may be replaced if necessary.

6.2 INSTITUTIONAL CONTROLS

Institutional controls are measures undertaken to limit or prohibit activities that may interfere with the integrity of a cleanup action or result in exposure to hazardous substances at the site. Such measures are required to assure both the continued protection of human health and the environment and the integrity of the cleanup action whenever hazardous substances remain at the site as concentrations exceeding the applicable cleanup level. Institutional controls are also specifically required to protect terrestrial plants and animals based on the terrestrial ecological evaluation. Institutional controls can include both physical measures and legal and administrative mechanisms. WAC 173-340-440 provides additional information on institutional controls, and the conditions under which they may be removed.

Institutional controls are an important component of the cleanup action plan for the South Wilbur Petroleum Contamination Site. Residual contamination in groundwater will remain at the site. Both physical controls and legal and administrative mechanisms will be used to ensure the current and future residents do not come into contact with residual contamination and that the integrity of the cleanup action is maintained. Institutional controls will take the form of fences and signs at the property, and restrictive covenants placed with the deed. The restrictive covenants will limit site use with the purpose of minimizing disturbance to the asphalt paving, and will also prevent any excavation, well installation, or withdrawal of water for any purpose other than monitoring on the property.

6.3 FINANCIAL ASSURANCES

WAC 173-340-440 states that financial assurance mechanisms shall be required at sites where the selected cleanup action includes engineered and/or institutional controls. Financial assurances are not required if a PLP can demonstrate that sufficient financial resources are available and in place to provide for long-term effectiveness of engineered and/or institutional controls required in the CAP.

6.4 FIVE YEAR REVIEW

As long as groundwater cleanup levels have not been achieved, WAC 173-340-420 states that at sites where a cleanup action requires an institutional control, a periodic review shall be completed no less frequently than every five years after the initiation of a cleanup action. Since institutional controls will be required, five year reviews shall take place at this Site. Groundwater monitoring data shall be reviewed to continue to assess the effectiveness of the groundwater treatment and engineering controls in reducing contaminant concentration. If concentrations of contaminants in groundwater are not decreasing, then further remedial action will be considered.

7.0 REFERENCES CITED

CH2MHill, 2002, Lincoln County Remedial Investigation/Feasibility Report South Wilbur Petroleum Contamination Site

EXHIBIT C
Scope of Work and Schedule for the Cleanup Action at the
South Wilbur Petroleum Contamination Site, Wilbur WA

Lincoln County (PLP) will perform all elements of this Scope of Work in order to perform a cleanup action at the South Wilbur Petroleum Contamination Site (Site). The PLP will use this Scope of Work to develop Work Plans in order to implement the Cleanup Action Plan (CAP) for the Site. The PLP shall furnish all personnel, materials, and services necessary for, or incidental to, implementing the CAP at the Site.

The cleanup action shall contain the following tasks:

A. Remedial Action Plan:

PLP shall prepare a work plan, the Remedial Action Plan, outlining procedures for the cleanup action. The Remedial Action Plan shall contain the goals of the cleanup action, performance requirements, brief general facility information and site operational history, brief site characterization history, characteristics of the contaminants and contaminated media, summary of the remedial action, and schedule of deliverables. The Remedial Action Plan shall, in addition, include the following elements, which shall conform with the requirements of WAC 173-340-400 and WAC 173-303-410:

1. Engineering Design Report

The Engineering Design Report shall include a soil excavation plan, material and design specifications, sampling specifications, construction schedules, and information on backfill and oxygen releasing compound emplacement, testing, compaction, and final grading. The Plan shall also include specifications for the impervious surface barrier and stormwater control system.

2. Construction Plans and Specifications

Construction Plans and Specifications shall detail the the cleanup actions to be performed. The plans and specifications shall be prepared in conformance with currently accepted engineering practices and techniques. They shall include a general description and schedule of work to be performed, a summary of design criteria, maps, copies of permits, detailed plans and material specifications necessary for construction, specifics of any quality control testing to be performed, startup procedures, and additional information to address applicable state, federal, and local requirements. In addition, these plans and specifications shall include:

a. Health and Safety Plan

PLP will prepare a Health and Safety Plan that conforms with WAC 173-340-810. This plan shall include emergency information, characteristics of waste, levels of protection, hazard evaluation, and any other site specific information.

b. Quality Assurance Project Plan

The Quality Assurance Project Plan from the RI/FS shall be reviewed and revised as appropriate, and made a part of the Remedial Action Plan.

c. Data Management Plan

The Data Management Plan from the RI/FS shall be reviewed and revised as appropriate, and made a part of the Remedial Action Plan.

3. Operations and Maintenance Plan

The operations and maintenance plan shall present technical guidance and regulatory requirements to assure effective operations under normal and emergency conditions. The plan shall include contingency procedures, and any procedures for maintenance of the facility after completion of the cleanup action. Also, the following information shall be included:

a. Compliance Monitoring Plan

Compliance monitoring consists of protection monitoring, performance monitoring, and confirmational monitoring. Protection monitoring confirms that human health and the environment are adequately protected during construction and operation of a cleanup action. Performance monitoring confirms that the cleanup action has attained cleanup and/or performance standards. Confirmational monitoring confirms the long-term effectiveness of the cleanup action once cleanup standards are attained.

i. Groundwater Monitoring, Sampling & Analysis Plan

Groundwater monitoring represents performance and confirmational monitoring. The plan shall provide details for the sampling of all wells on the Site.

ii. Soil Compliance Monitoring Plan

Soil monitoring represents protection and performance monitoring. PLP shall collect soil samples during the implementation of the cleanup action, to show that soil cleanup standards have been attained.

b. Institutional Controls

As a component of the remedial action and as required by the Cleanup Action Plan, institutional controls will be placed on the Site. As described in WAC 173-340-440, institutional controls are to limit or prohibit activities that may interfere with the integrity of a cleanup action. Institutional controls at this Site will take the form of deed restrictions limiting use of groundwater and

prohibiting site uses inconsistent with the selected cleanup action. A copy of the filed deed restriction shall be included with the Remedial Action Plan.

B. Cleanup Action Report

PLP shall submit a final cleanup action report after the completion of all elements of the Remedial Action Plan, except confirmational monitoring. The report shall include, but not be limited to:

- all aspects of facility construction, including the final as-built drawings or design documents;
- all compliance monitoring data gathered;
- a stamped statement from a professional engineer as to whether the cleanup action was completed in substantial compliance with the plans and specifications for the site; and
- copies of property deeds, documenting that institutional controls are in place.

C. Remedial Action Performance and Groundwater Compliance Monitoring Report

To track the performance of the cleanup action, PLP shall prepare and submit to Ecology quarterly reports presenting the results of compliance monitoring.

Schedule of Deliverables

<u>Deliverables</u>	<u>Date Due</u>
Effective date of Order	Start
Draft Remedial Action Plan and Schedule of Work to be Performed	30 days after start
Final Remedial Action Plan and Schedule of Work to be Performed	30 days after Ecology approval of draft
Begin implementation of Remedial Action following Schedule of Work to be Performed	15 days after approval of work plans
Draft Cleanup Action Report	As approved in RI/FS Work Plan
Final Cleanup Action Report	30 days after Ecology approval of draft
Progress Reports	Every 2 months
Groundwater Monitoring Reports	Quarterly until Ecology determines that groundwater cleanup levels have been attained

EXHIBIT D. RESTRICTIVE COVENANT

RESTRICTIVE COVENANT

Grantor: Lincoln County
PO Box 366-450 Logan Street
Davenport, WA 99122

Grantee: Washington Department of Ecology
4601 North Monroe
Spokane, WA 99205-1295

Legal Description:

Lots 1, 2, 15, 16, Block 82; vacated street north of Block 82; east 50 feet of the vacated alley in Block 82, the east 50 feet of Knox Street between Blocks 81 and 82, Railroad Addition to the Town of Wilbur.

Lots 3 through 14, Block 82; west 150 feet of the vacated alley in Block 82, Railroad Addition to the Town of Wilbur.

RESTRICTIVE COVENANT

The property that is the subject of this Restrictive Covenant has been the subject of remedial action under Chapter 70.105D RCW. The work done to clean up the property and conduct long-term operation and maintenance (hereafter the "Cleanup Action") is described in the Consent Decree entered in State of Washington Department of Ecology v. Lincoln County, Lincoln County Superior Court Cause No. _____, and in attachments to the Decree and in documents referenced in the Decree. This Restrictive Covenant is required by Ecology under Ecology's rule WAC 173-340-440 (2001 ed.) because activities on the Site resulted in residual concentrations of hazardous substances which exceed Ecology's Method B cleanup levels for groundwater established under WAC 173-340-730(3).

The undersigned, Lincoln County ("The County") is the fee owner of real property (hereafter "the Property") in the County of Lincoln, State of Washington (legal description and map attached), that constitutes part of the South Wilbur Petroleum Contamination Site. The County makes the following declaration as to limitations, restrictions, and uses to which the Property may be put, and specifies that such declarations shall constitute covenants to run with the land, as provided by law, and shall be binding on all parties and all persons claiming under them, including all current and future owners of any portion of or interest in the Property.

Section 1.

- a. No groundwater may be taken for any use unless the groundwater removal is part of monitoring activities associated with an Ecology-approved compliance monitoring plan.

- b. Any activity on the Property that may result in the release or exposure to the environment of a hazardous substance that remains on the Property as part of the Cleanup Action, or that may create a new exposure pathway, is prohibited. Such prohibited activities include, but are not limited to, drilling, digging, placement of any objects or use of any equipment which deforms or stresses the surface beyond its load bearing capability, piercing the surface with a rod, spike or similar item, bulldozing or earthwork.

Notwithstanding the prohibitions contained within this declaration, the Owner may maintain, repair or replace existing underground utilities or perform minor site grading provided that the work is conducted by individuals who are properly trained in appropriate health and safety precautions necessary for working within hydrocarbon affected soil and groundwater and any hydrocarbon affected soil or groundwater encountered during such work is handled and disposed of in accordance with all applicable local, state, and federal regulations and requirements.

Section 2. Any activity on the Property that may interfere with the Cleanup Action, operation and maintenance, monitoring, or other measures necessary to assure the integrity of the Cleanup Action and continued protection of human health and the environment is prohibited.

Section 3. The Owner of the Property must give thirty (30) day advance written notice to Ecology of the Owner's intent to convey any interest in the Property. No conveyance of title, easement, lease, or other interest in the Property shall be consummated by the Owner without adequate and complete provision for continued monitoring, operation, and maintenance of the Cleanup Action on the Property, and for continued compliance with this section.

Section 4. The Owner must restrict leases to uses and activities consistent with this Restrictive Covenant and notify all lessees of the restrictions herein on the use of the Property.

Section 5. The Owner must include in any instrument conveying any interest in any portion of the Property, notice of this Restrictive Covenant.

Section 6. The Owner must notify and obtain approval from Ecology prior to any use of the Property that is inconsistent with the terms of this Restrictive Covenant. Ecology may approve an inconsistent use only after an opportunity for public notice and comment is provided. If Ecology, after public notice and opportunity for comment, approves the proposed change, the restrictive covenant shall be amended to reflect the change.

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

Section 8. If the conditions at the site requiring the entry of this Restrictive Covenant no longer exist, the Owner may submit a request to Ecology that the Restrictive Covenant be eliminated. The Owner may record an instrument removing the Restrictive Covenant only if Ecology, after public notice and opportunity for comment, concurs.

Dated: _____

LINCOLN COUNTY

signatory

position

STATE OF WASHINGTON)

) ss

COUNTY OF LINCOLN)

On this _____ day of _____, 2004, before me, a Notary Public for said state, personally appeared (signatory), known to be (position) of Lincoln County, the corporation that executed the above instrument and acknowledged to that such corporation executed the same.

Notary Public, State of _____

Residing at _____

My commission expires _____

Public Works Ownership Wilbur, Lincoln County, WA

1:3,000
1 inch equals 250 feet

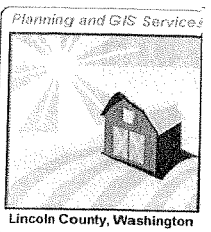


EXHIBIT E. PUBLIC PARTICIPATION PLAN

South Wilbur Petroleum Contamination Site

Amended Public Participation Plan

Prepared by
The Washington State Department of Ecology

September 2004

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1.0 INTRODUCTION

1.1 DOCUMENT ORGANIZATION

Section 1 provides an overview of the Amended Public Participation Plan (Plan), lists primary contact persons, and explains the Model Toxics Control Act (MTCA) and its requirement for a Public Participation Plan for those sites that must comply with MTCA.

Section 2 provides a description of the pertinent background and historical information including previous investigations and existing site conditions. In addition, this section describes contaminants of concern, land use and zoning.

Section 3 provides a background and profile on the community. A summary of community interviews and community concerns is also provided.

Section 4 describes the clean-up process and identifies the proposed activities that will meet the public involvement program.

Section 5 describes the public participation activities and provides an anticipated timeline for these activities.

Appendices: There are three appendices: Appendix A lists key public involvement contacts (mailing list); Appendix B provides the results of a community interview; and Appendix C is a glossary.

1.2 OVERVIEW OF AMENDED PUBLIC PARTICIPATION PLAN

The February 2001 Plan was developed by CH2M HILL Inc., Lincoln County Public Works (Lincoln County), and the Washington State Department of Ecology (Ecology) for the South Wilbur Petroleum Contamination Site located in Wilbur, Washington, and was updated by Ecology. As defined, the "Site" is located south of Goose Creek, west of Brace Street, north of Front Street, and east of the Wilbur Town Park. Site investigation and cleanup at this Site will focus on petroleum products (diesel and gasoline) in soil, shallow groundwater, and surface water of Goose Creek.

The Plan complies with the Washington State Model Toxics Control Act (MTCA) regulations (Chapter 173-340-600 WAC). The Potentially Liable Persons (PLPs) for cleanup at the site are Lincoln County, Washington State Department of Transportation (WSDOT), Lincoln Mutual No. 3, Joe and Tina Clark, and Jerome Clark. Lincoln County assumed the role of lead PLP and is coordinating and overseeing cleanup work at the Site.

This Amended Plan outlines public participation efforts that have and will occur for the South Wilbur Petroleum Contamination Site. These outreach efforts began at the remedial investigation and feasibility study stage of cleanup and will continue through implementation of the engineering design work (also known as the work plan). The Amended Plan may be changed, based on public comment and Ecology approval.

The purpose of the Plan is to promote public understanding of Ecology's responsibilities, planning, and cleanup activities at hazardous waste sites. It also serves as a way of gathering information from the public that will help Ecology and Lincoln County continue cleanup of the Site that is protective of human health and the environment. The Plan will provide the community of Wilbur an opportunity to be informed regarding Site cleanup activities that have taken place and also contribute to the decision making process in the final stages of cleanup.

Documents relating to the investigation and cleanup may be reviewed at the repositories listed on page 10 of this Plan. If individuals are interested in knowing more about the Site, or have comments regarding the Amended Public Participation Plan, please contact one of the individuals listed in the following table:

Ms. Sandra Treccani
Site Manager
Washington State Department of Ecology
Toxics Cleanup Program
4601 North Monroe
Spokane, WA 99205
509-329-3412
E-mail: satr461@ecy.wa.gov

Carol Bergin
Public Involvement
Washington State Department of Ecology
Toxics Cleanup Program
4601 North Monroe
Spokane, WA 99205
509-329-3546
E-mail: cabe461@ecy.wa.gov

Bob Breshears
Public Works Director and Engineer
Lincoln County Public Works
27234 SR 25 N
Davenport, WA 99122-0368
509-725-7041
E-mail: bbreshears@co.lincoln.wa.us

Mrs. Johnnie Landis
Public Disclosure
Washington State Department of Ecology
4601 North Monroe
Spokane, WA 99205
509-329-3415
E-mail: johh461@ecy.wa.gov

1.3 PUBLIC PARTICIPATION AND THE MODEL TOXICS CONTROL ACT

The Model Toxics Control Act (MTCA) is a citizens' initiative which passed in the November 1988 general election. It provides guidelines for the clean up of contaminated sites in Washington State. This law sets up strict standards to make sure the clean up of sites is protective of human health and the environment. The Department of Ecology's Toxic Cleanup Program investigates reports of contamination that may threaten human health and the environment. If an investigation confirms the presence of contaminants, the site is ranked and placed on a Hazardous Sites List. Current or former owner(s) or operator(s) as well as any other potentially liable persons (PLPs) of a site may be held responsible for cleanup of contamination according to the standards set under MTCA. The PLPs are notified by Ecology that the site has contaminants and the process of cleanup begins with Ecology implementing and overseeing the project.

Public participation is an important part of the MTCA process during investigation and cleanup of sites. The participation needs are assessed at each site according to interest expressed by the public and degree of risk posed by contaminants. Individuals who live near the site, community groups, businesses, organizations and other interested parties are provided an opportunity to become

involved in commenting on the cleanup process. The Plan includes requirements for public notice such as: identifying reports about the site and the repositories where reports may be read; providing public comment periods; and holding public meetings or hearings. Other forms of participation may be interviews, citizen advisory groups, questionnaires, or workshops. Additionally, citizen groups living near contaminated sites may apply for public participation grants to receive technical assistance in understanding the investigation and cleanup process and to create additional public participation avenues. Ecology maintains responsibility for public participation at the site and Lincoln County will continue to assist with the coordination and implementation of these efforts.

2.0 SITE BACKGROUND

2.1 SITE DESCRIPTION

The Site is located within the Township of Wilbur, Washington (Figure 1). The Wilbur Site is located within the commercial district of Wilbur, south of the main business district and north of the Burlington Northern Railroad tracks (Figure 2).

The Site includes the former WSDOT maintenance facility and the adjacent Lincoln County Maintenance yard and facilities. It also includes to the east and across Anne Street, the former Lincoln Mutual No. 3 property that extends from Anne to Brace Street. Goose Creek borders the Site to the north, the City Park to the west, Front Avenue to the south, and Brace Street to the east. The neighboring land use is commercial, light industrial, and recreational including railroad operations, agricultural storage, bulk fueling facilities, and a public park.

The Site is relatively flat at an approximate elevation of 2,182 ft +msl (USGS, 1978, Wilbur 7.5 Minute Quadrangle) that slopes gently to the west, lying within the floodplain of Goose Creek. The Goose Creek channel borders the site to the north in a well-defined channel cut, approximately 6 feet deep (USDA, 1976, Goose Creek Watershed). There are no recognized stormwater or runoff controls apparent at the Wilbur Site.

2.2 SITE BACKGROUND

The Lincoln County and former WSDOT maintenance yards operated as vehicle maintenance, fueling and storage facilities from the 1930s through the present. The former Lincoln Mutual No. 3 site was historically used for fuel storage, maintenance, and vehicle fueling since at least the 1950s, as identified in aerial photographs. Figure 3 shows the approximate locations of fuel storage tanks and dispensing equipment that had been present at the site. Several of these historical fuel storage and dispensing features are potential sources for petroleum hydrocarbon impacts identified in previous investigations. A brief overview of these various fuel storage and dispensing features is presented below.

The Lincoln County maintenance yard is the former location of four underground storage tanks (UST). An 8,000 gallon diesel UST was located north of the south garage and was removed in 1992 by Lincoln County. A 500 gallon waste oil UST was located at the northwest corner of the south garage and was removed in 1990 by Lincoln County. A 500-gallon unleaded UST located on the west side of the south garage and a 550-gallon unleaded UST located at the

southwest corner of the south garage were both also removed in 1990 by Lincoln County. Undocumented releases from the two gasoline USTs reportedly have occurred at the site.

The former WSDOT maintenance yard is the former location of two USTs, two above ground storage tanks (ASTs), and a dry well receiving discharge from a sump located within the maintenance building. Two 1,000 gallon USTs, one diesel and the other gasoline, were located on the west and south side of the garage. The vehicle fueling dispenser was located at the property boundary facing Front Avenue. A 1,100 gallon diesel AST was located on the east and south side of the garage. The dispenser was located at the property boundary also facing Front Avenue for vehicle fueling. An out-of-service 5,000 gallon asphalt AST is located on the west side of the site. The sump was located approximately 32 feet north of the garage and was constructed of a 5 foot diameter concrete culvert. Evidence of petroleum hydrocarbons were found in both the floor sump of the garage and in the dry well. Additionally, undocumented releases are reported to have occurred from the two USTs, as well as impacted soil around the diesel AST, most likely due to dispenser releases.

The former Lincoln Mutual No. 3 site is the former location of a fueling island and dispenser pumps and a 1,900 gallon diesel AST. The fuel island is most likely the location of two ASTs as identified from the existing surface depressions, with a dispenser located between, as observed in aerial photographs. Undocumented releases have reportedly occurred from the dispenser location most likely resulting from dispenser lines leaks. The diesel AST was reportedly located on the earthen ramp. Vehicles were refueled adjacent to the ramp, while the tank was loaded from the ramp. Due to the length of service and type of fuel dispensing, this area is considered likely impacted by petroleum hydrocarbons.

2.3 LAND USE AND ZONING

The Wilbur Site and the adjacent properties are zoned commercial and have historically been used for commercial and light industrial with the exception of the park, which allows public access for picnics, use of playground equipment, swimming in the town pool, fishing during the Wild Goose Bill Days fishing derby, and other outside recreational activities. The adjacent properties include the Town Park to the west, United Grain Growers and Burlington Northern Santa Fe Railroad to the south across Front Avenue, and contractor garage and storage to the west and north across from Anne Street.

2.4 SITE HISTORY AND PREVIOUS INVESTIGATIONS

The following is a brief chronology of tank installation, tank removal, previous site investigations and source removal actions that have been conducted at the Site through 2000:

1952 - 1966: Washington State Department of Transportation (DOT) installs two 1000- gallon underground storage tanks for gas & diesel; 1,100 gallon diesel AST also located on site, but age of installation not known

1966 - 1979: Aerial photos imply that fuel dispenser and AST are present on the Lincoln Mutual property

1990: Lincoln County removes two 500 gal USTs (UL gas) and one 500 gal waste oil tank

1991: DOT removes two 1000 gallons USTs (gas & diesel)

1992: Lincoln County removes one 8000 gal diesel UST DOT performs sump characterization

1994: Vaughn Distributors (Lincoln Mutual) installs new fuel line; localized area of heavy fuel contamination observed

1995: DOT investigates dry well and conducts test pit exploration program; TPH contamination noted around 1,100 gallon AST (diesel) - tank removed

1996: DOT installs and samples four monitoring wells (MW-1 through MW-4) DOT removes dry well and seals garage sump

1997: DOT installs and samples monitoring wells MW-5 through MW-7 on Lincoln County parcel and performs a Geoprobe investigation for soil and shallow groundwater

1998: Ecology (SAIC) collects soil and shallow groundwater samples as part of a Strataprobe investigation

1999: Ecology conducts site ranking and adds site to the Site Register

2000: Agreed Order No. 00TCPER-1465 is signed (June 2000)

2002: RI/FS is completed by CH2M Hill for Lincoln County and report is accepted by Ecology

2.5 CONTAMINANTS OF CONCERN

Petroleum products including gasoline, diesel, and volatile components of petroleum products e.g., benzene, toluene, ethyl benzene and total xylene (BTEX) are present in groundwater and soil at the site.

Previous investigations indicate that the contamination came from fuel storage and dispensing activities. Contamination is localized, in general, to the Lincoln County maintenance yard, former WSDOT maintenance yard and the former Lincoln Mutual No. 3 site. Some petroleum-related contamination also has been identified in shallow groundwater beneath the town park, which lies immediately west of the former WSDOT maintenance yard. No direct observations of water quality impacts (petroleum sheen or documented petroleum hydrocarbons releases) have been reported for Goose Creek; limited surface water sampling of Goose Creek in 1998 found no evidence of petroleum hydrocarbon constituents in a water sample collected immediately downstream from the Site.

3.0 COMMUNITY BACKGROUND

Wilbur is a small rural town of approximately 895 people located between the towns of Creston and Almira on Highway 2 in Eastern Washington. It is also the “gateway” to Grand Coulee Dam where Highway 2 intersects Highway 174. It is nestled next to Goose Creek with basalt cliffs to the north and south of town.

Wilbur was named after its founding father Samuel Wilbur Condon, known as “Wild Goose Bill,” a name that was given to him after shooting into a flock of tame geese that he believed were wild. The town was originally incorporated under territorial law on May 25, 1889, but this incorporation was declared void when Washington became a state on November 11, 1889. However, local citizens immediately applied for legal incorporation, which was granted in August, 1890 (Wilbur Recreational Area 2000-2001 Visitor’s Guide, Wilbur Register).

3.1 COMMUNITY PROFILE

The Wilbur community is very “close knit.” It is a place where people generally know their neighbors and in some cases, families have lived in the area for up to five generations. The community is very involved in local school sports including football, volleyball, basketball, wrestling, track, baseball, and tennis. It is with great pride that Wilbur (with the assistance of nearby Creston students) usually place well in district and state tournaments as the Wildcats.

The community is also closely connected with natural resource industries (farming, ranching and timber). Lincoln County is known as the second largest wheat producing county in the nation. There are local grain growers’ cooperatives that own grain elevators for the storage of wheat, barley, and oats. Harvest usually occurs in late July and August, and during that time wheat trucks are commonly seen on local roads and on downtown streets. Many people work at the grain growers or other businesses that support the farmers including fertilizer companies, parts companies, insurance companies, and equipment dealers.

The people in the area also enjoy many recreational activities including swimming, boating and fishing on Lake Roosevelt to the north, and numerous creeks and “pot-hole” lakes in the surrounding areas, particularly to the south. Many people hunt the area looking for deer, upland birds, elk, and other animals. The Big Bend Golf and Country Club, located northwest of Wilbur, provides a nine-hole golf course near town. Emerson Park sports complex, located on the east end of town, has lighted tennis courts, a lighted football field, a track and baseball diamonds. There are also tourists that stop in town on their way to visit Grand Coulee Dam to the north or to visit Sun Lakes State Park and Dry Falls to the west.

3.2 COMMUNITY INTERVIEWS

When the South Wilbur Petroleum Contamination Site became known by the public, little or no concern was expressed, either by the local townspeople or by any organized community group. Given this limited degree of local public concern over the Site, only a few community interviews were conducted. These were conducted both to gather additional information for development of the

February 2001 Plan, and to determine if the public perception (and apparent level of concern) had changed.

Carla Shirley, Town Clerk, was updated on the status of the site on October 26, 2000 by CH2M HILL and she indicated, "although the Town of Wilbur would like to be kept informed of cleanup progress, the "town" was not too concerned about the site." There was an implied understanding that Lincoln County would manage the contaminated site in a way that would adequately address any potential concerns of the local people, and provide an adequate appraisal of site cleanup progress (Refer to Appendix C for interview questions and answers).

Don Reid, Mayor of Wilbur, was selected for an interview on November 30, 2000. He confirmed that the community had only minimal concerns about the Site and trusted Lincoln County to manage the investigation and cleanup in a responsible manner (Refer to Appendix C for interview questions and answers).

Lori Mann was selected for an interview on January 18, 2001. She confirmed that she has confidence in Lincoln County and Ecology to manage the investigation and cleanup in a responsible manner (Refer to Appendix C for interview questions and answers).

Jean Seylor was also selected for an interview on January, 18, 2001. She confirmed that she has confidence in Lincoln County and Ecology to manage the investigation and cleanup in a responsible manner (Refer to Appendix C for interview questions and answers).

3.3 COMMUNITY CONCERNS

Based on discussions with Ecology; Ted Hopkins (Lincoln County Commissioner who represents this district), Carla Shirlie, and Don Reid, the primary community concerns were related to continued commercial use of the impacted properties, protection of Goose Creek, protection of the people who utilize the Town Park, and the ability to continue to sponsor the fishing derby that is held in the Park during "Wild Goose Bill Days."

The public has been invited to comment on the cleanup during various stages since the February 2001 Plan. During the Remedial Investigation/Feasibility Study phase, one comment was received during the 30-day comment period. The Mayor requested Ecology keep him informed and updated about progress at the site and any issues affecting the park or buildings during excavation. The Mayor has been informed about the cleanup throughout the process.

During the comment period for the Draft Cleanup Action Plan and State Environmental Policy Act Determination of Non-Significance, one comment was received from the Washington State Department of Transportation. Responses to these technical comments are found in the Responsiveness Summary prepared by Ecology and dated May 6, 2003. The summary may be reviewed at Ecology's Eastern Regional Office, 4601 N. Monroe, Spokane, Washington.

4.0 SITE CLEANUP PROCESS

4.1 AGREED ORDER

The Agreed Order to perform a Remedial Investigation/Feasibility Study (RI/FS) is a legal document formalizing the agreement between Ecology and the potentially liable persons (PLPs) to ensure cleanup activities are conducted appropriately. The Order is completed under the authority of the Model Toxics Control Act (MTCA) Chapter 70.105D RCW. Lincoln County has assumed responsibility of the RI/FS process as the lead PLP.

4.2 REMEDIAL INVESTIGATION/FEASIBILITY STUDY (RI/FS)

The purpose of the Remedial Investigation/Feasibility Study (RI/FS) is to collect, develop and evaluate information regarding petroleum contamination in affected areas on and off site. The RI defines the type, extent and degree of known soil and shallow ground water contamination, and assesses potential impacts to surface water and sediments in Goose Creek, The FS identifies, evaluates and proposes alternative cleanup actions.

4.3 CLEANUP ACTION PLAN (CAP)

The purpose of the CAP is to select the cleanup action, outline the standards and other requirements necessary to complete cleanup at the site. Ecology has selected source removal with engineering controls and enhanced bioremediation for the cleanup. The following are the primary actions that will take place at the site to cleanup petroleum contamination in soil and groundwater:

- Remove contaminated soil and treat it off-site
- Fill areas where contaminated soil has been removed with a mix of clean soil and an oxygen releasing compound
- Install engineering controls, including asphalt pavement and stormwater controls; and install a phytoremediation barrier on the north and west sides of the site
- Placing restrictions on the property to limit access and protect potential receptors from any potential contamination that may temporarily remain after the cleanup. This will maintain the integrity of the cleanup action.

4.4 STATE ENVIRONMENTAL POLICY ACT AND DETERMINATION OF NON-SIGNIFICANCE (SEPA DNS)

The State Environmental Policy Act, known as SEPA requires governmental agencies to consider potential environmental impacts of a project. After review of a completed environmental checklist and other site specific information, Ecology has determined the cleanup of petroleum products at the site will not have a probable adverse impact on the environment. This cleanup action will benefit the environment by reducing and eventually eliminating the release of toxic chemicals from the site. Therefore, Ecology has issued a Determination of Non-Significance.

4.5 CONSENT DECREE

Ecology is proposing to enter into a Consent Decree with Lincoln County to carry out cleanup activities listed under Section 4.3 above. The Consent Decree is a legal document which formalizes the agreement between Ecology and Lincoln County to do this cleanup work and is entered and approved by a court. The proposed Consent Decree is being issued under the authority of the Model Toxics Control Act (MTCA), Chapter 70.105D RCW and ensures the cleanup will proceed in accordance with all applicable laws and regulation.

5.0 PUBLIC PARTICIPATION ACTIVITIES AND TIMELINE

The following are public participation efforts that will continue until the cleanup actions are completed:

5.1 MAILING LIST

A **mailing list** was developed of all individuals who reside within the potentially affected area of the Site. The potentially affected vicinity covers the properties that adjoin the site as bordered by Front Street on the south, Brace Street on the east, Goose Creek and Railroad Avenue on the north and the Town Park on the west.

Homes and/or businesses within a few blocks radius of the Site were added to the mailing list. These persons will receive copies of all fact sheets developed regarding the investigation and cleanup process for the Site via first class mail. Additionally, individuals, organizations, local, state and federal governments, and any other interested parties will be added to the mailing list. Other interested persons may request to be on the mailing list at any time by contacting Sandy Treccani or Carol Bergin at the Department of Ecology (see page 2) for addresses/phone and e-mail).

5.2 CLEANUP ACTION ALTERNATIVES

Cleanup alternatives to meet these remedial action objectives are evaluated as part of the RI/FS for the Site. The feasibility study evaluated six options for soil and groundwater (institutional controls, containment, ex-situ or in-situ treatment, and excavation with on-site or off-site disposal). These options were combined to form five alternatives for addressing all contaminated media at the Site. The following five alternatives are based on the proposals made by the City.

5.3 INFORMATION REPOSITORIES

Public Repositories have been established and documents may be reviewed at the following offices:

Wilbur Town Hall
14 NW Division
P.O. Box 214
Wilbur, WA 99185

Department of Ecology
Eastern Regional Office
4601 N. Monroe, Suite 202
Spokane, WA 99205-1295

Lincoln County Public Works Director and Engineer – Bob Breshears
27234 SR 25 N
Davenport, WA 99122-0368
(509) 725-7041

5.4 FACT SHEET

During each stage of cleanup **fact sheets** are created by Ecology and distributed to individuals on the mailing list. These fact sheets explain the stage of cleanup, the Site background, what happens next in the cleanup process and ask for comments from the public. A **thirty (30) day comment period** allows interested parties time to comment on the process. The information from these fact sheets is also published in a **Site Register** which is distributed to the public. Persons interested in receiving the Site Register should contact Linda Thompson of Ecology at 360-407-6069 or e-mail Ltho461@ecy.wa.gov.

5.5 NOTICES

Display ads or legal notices are published in *The Wilbur Register* and *The Davenport Times* to inform the general public. These notices correlate with the thirty day comment period and associated stage of cleanup. They are also used to announce public meetings and workshops or public hearings.

5.6 PUBLIC MEETINGS

Public meetings, workshops, open houses and public hearings are held based upon the level of community interest. If ten or more persons request a public meeting or hearing based on the subject of the public notice, Ecology will hold a meeting/hearing and gather comments. These meetings would be held at the Wilbur Town Hall in Wilbur, Washington.

5.7 RESPONSIVENESS SUMMARY

Written comments received during the thirty day comment period will be responded to in a **Responsiveness Summary**. The Responsiveness Summary will be sent to those who make the written comments and will be available for public review at the Repositories.

5.8 ANSWERING QUESTIONS FROM THE PUBLIC

Individuals in the community may have questions they want to ask so they may better understand the cleanup process. Page 2 lists the contacts for the South Wilbur Petroleum Contamination Site.

Interested persons are encouraged to contact these persons by phone or e-mail to obtain information about the Site, the process and potential decisions.

5.9 OBTAINING COMMUNITY INPUT ON SITE DECISIONS

The public is invited to comment on the amended public participation plan and the Consent Decree, with its associated documents, during a thirty day comment period. If ten or more people request a public meeting or hearing to discuss these documents, the request will be granted. Input will also be sought on future site-related activities as applicable.

5.10 TIME LINE

The following table shows project milestones that are associated with Lincoln County's Remedial Investigation/Feasibility Study and forthcoming remedial measures. The milestones are provided with estimated dates and the type of public review for each milestone is identified.

Date	Action Taken
June 28, 2000 – July 28, 2000	Public Comment Period (30 days) for Draft Agreed Order for Remedial Investigation/ Feasibility Study
October 2000	Initial RI/FS Scoping meeting with Ecology.
November 2000	Conduct Public Interviews
December, 2000	Submittal of Draft RI/FS Work Plan for Ecology review
January –April 2001	Conduct RI data collection and field activities; routine bi-monthly status reports submitted to Ecology
April 2001	Meet with Ecology to discuss preliminary findings from the remedial investigation; Provide a status report to the Town of Wilbur
April – June 2001	Work on development of a Draft RI report
May 22, 2002 – June 20, 2002	Public Comment Period (30 days) for Draft Remedial Investigation /Feasibility Study Reports
March 26, 2003 – April 24, 2003	Public Comment Period (30 days) for Draft Cleanup Action Plan and SEPA DNS
September	Public Comment Period (30 days) for Consent Decree

APPENDIX A
CURRENT MAILING LIST – SOUTH WILBUR PETROLEUM CONTAMINATION SITE

APPENDIX B
QUESTIONS AND RESPONSES: COMMUNITY INTERVIEWS

Carla Shirley Interview

The following are interview questions and responses received from Carla Shirley, Town Clerk of Wilbur.

What do you think about the contaminated Lincoln County Site and what are your concerns?
“Although the Town of Wilbur would like to be kept informed of the cleanup progress, the “town” is not concerned about this site. There was an implied understanding that Lincoln County would manage the contaminated site in a way that would adequately address any potential concerns of the local people, and provide an adequate appraisal of site cleanup progress”.

Don Reid Interview

The following are interview questions and responses received from Don Reid, Mayor of Wilbur.

1. Do you believe your health or the health of the community is or has been affected by the hazardous substances at the site?
No.
2. Do local homeowners or businesses believe that the site has caused you, or will cause you, economic loss?
Don't know.
3. From your perspective, does the public have confidence in the performance of the agency responsible for the remedial or removal action? What do you, personally, feel?
The public and I have total trust in the County.
4. What current or previous experience does the community have in public involvement? Are there any group leaders who have been vocal in the community?
Current or previous experience that the community has with public involvement is providing public notice and conducting public meetings in regards to Town Council actions. Haven't heard a work from any group leaders in the community.
5. Do you believe that media coverage accurately reflects the nature and intensity of your concerns, the concerns of the community? Have events at the site received adequate media coverage? What media do you get your information from? What about others in the community?
*It is hard to say whether or not the media coverage accurately reflects the nature and intensity of the community and my concerns. Media coverage has not been adequate. Media information is from the local newspaper, **The Wilbur Register**.*
6. How would you like to be informed about progress at the site?
*Fact Sheets (information sheets)
Newspaper articles – "best to keep low key"
Inform Council of the status of the project
Have an opportunity to comment on Work Plan and the RI/FS Report.*
7. How would you like to be involved?
*The Council should be kept informed periodically. A letter to the Council, written as a project status report, would be sufficient communication.
Receive notices of comment periods
Attend public meetings/hearings
Meet with a site manager – not needed, Marlana can talk to me directly*
8. Where would you suggest reports, etc. be available for review? (a library, for instance)
Wilbur Town Hall
9. Where would you suggest Ecology hold public meetings or hearings?
Community Center
10. How would you define the potentially affected vicinity? From your perspective, who in this area should be informed about the site?
The potentially affected vicinity would be the nearby property owners and the Town (Park).
11. Is there anyone else you think we should talk to?
No, just property owners and the County.
12. What do you already know about the site? Do you have any specific concerns?
I know that there is a petroleum contamination at the site. Nothing comes to mind.

Jean Saylor Interview

The following are interview questions and responses received from Jean Saylor, citizen of Wilbur, Washington.

1. Do you believe your health or the health of the community is or has been affected by the hazardous substances at the site?
No.
2. Do local homeowners or businesses believe that the site has caused you, or will cause you, economic loss?
No.
3. From your perspective, does the public have confidence in the performance of the agency responsible for the remedial or removal action? What do you, personally, feel?
Yes, I do have confidence in Lincoln County. I don't think they will let it get too far out of hand.
4. What current or previous experience does the community have in public involvement? Are there any group leaders who have been vocal in the community?
Not much. No.
5. Do you believe that media coverage accurately reflects the nature and intensity of your concerns, the concerns of the community? Have events at the site received adequate media coverage? What media do you get your information from? What about others in the community?
*Media: they make it look like they want it to.
Adequate media coverage? No.
Media information is from the Wilbur Register and The Spokesman Review.
Others in the community get their information from the same media sources.*
6. How would you like to be informed about progress at the site?
Wilbur Register
7. How would you like to be involved?
Paper would be adequate
8. Where would you suggest reports, etc. be available for review? (a library, for instance)
Town Hall
9. Where would you suggest Ecology hold public meetings or hearings?
Town Council Meetings
10. How would you define the potentially affected vicinity? From your perspective, who in this area should be informed about the site?
Neighboring properties, park
11. Is there anyone else you think we should talk to?
No
12. What do you already know about the site? Do you have any specific concerns?
Site looks the same. The government (Ecology) will make certain everything is taken care of.

Lori Mann Interview

The following are interview questions and responses received from Lori Mann, citizen of Wilbur.

1. Do you believe your health or the health of the community is or has been affected by the hazardous substances at the site?
No.
2. Do local homeowners or businesses believe that the site has caused you, or will cause you, economic loss?
No.
3. From your perspective, does the public have confidence in the performance of the agency responsible for the remedial or removal action? What do you, personally, feel?
Yes, I have confidence.
4. What current or previous experience does the community have in public involvement? Are there any group leaders who have been vocal in the community?
No. Everyone basically observes what's going on.
5. Do you believe that media coverage accurately reflects the nature and intensity of your concerns, the concerns of the community? Have events at the site received adequate media coverage? What media do you get your information from? What about others in the community?
Media: yes, I do.
Adequate media coverage? No.
Media information is from the Wilbur Register and The Spokesman Review.
Others in the community receive their information from the same media sources.
6. How would you like to be informed about progress at the site?
Wilbur Register
7. How would you like to be involved?
Paper would be adequate
8. Where would you suggest reports, etc. be available for review? (a library, for instance)
Town Hall
9. Where would you suggest Ecology hold public meetings or hearings?
Town Council Meetings
10. How would you define the potentially affected vicinity? From your perspective, who in this area should be informed about the site?
Neighboring parties
11. Is there anyone else you think we should talk to?
No
12. What do you already know about the site? Do you have any specific concerns?
No concerns they (Lincoln County) will take care of it just fine.

APPENDIX C GLOSSARY

Agreed Order: A legal document issued by Ecology which formalizes an agreement between the department and potentially liable persons (PLPs) for the actions needed at a site. An agreed order is subject to public comment. If an order is substantially changed, an additional comment period is provided.

Applicable State and Federal Law: All legally applicable requirements and those requirements that Ecology determines are relevant and appropriate requirements.

Area Background: The concentrations of hazardous substances that are consistently present in the environment in the vicinity of a site which are the result of human activities unrelated to releases from that site.

Carcinogen: Any substance or agent that produces or tends to produce cancer in humans.

Chronic Toxicity: The ability of a hazardous substance to cause injury or death to an organism resulting from repeated or constant exposure to the hazardous substance over an extended period of time.

Cleanup: The implementation of a cleanup action or interim action.

Cleanup Action: Any remedial action, except interim actions, taken at a site to eliminate, render less toxic, stabilize, contain, immobilize, isolate, treat, destroy, or remove a hazardous substance that complies with cleanup levels; utilizes permanent solutions to the maximum extent practicable; and includes adequate monitoring to ensure the effectiveness of the cleanup action.

Cleanup Action Plan: A document which identifies the cleanup action and specifies cleanup standards and other requirements for a particular site. After completion of a comment period on a Draft Cleanup Action Plan, Ecology will issue a final Cleanup Action Plan.

Cleanup Level: The concentration of a hazardous substance in soil, water, air or sediment that is determined to be protective of human health and the environment under specified exposure conditions.

Cleanup Process: The process for identifying, investigating, and cleaning up hazardous waste sites.

Consent Decree: A legal document, approved and issued by a court which formalizes an agreement reached between the state and potentially liable persons (PLPs) on the actions needed at a site. A decree is subject to public comment. If a decree is substantially changed, an additional comment period is provided.

Containment: A container, vessel, barrier, or structure, whether natural or constructed, which confines a hazardous substance within a defined boundary and prevents or minimizes its release into the environment.

Contaminant: Any hazardous substance that does not occur naturally or occurs at greater than natural background levels.

Enforcement Order: A legal document, issued by Ecology, requiring remedial action. Failure to comply with an enforcement order may result in substantial liability for costs and penalties. An enforcement order is subject to public comment. If an enforcement order is substantially changed, an additional comment period is provided.

Environment: Any plant, animal, natural resource, surface water (including underlying sediments), ground water, drinking water supply, land surface (including tidelands and shorelands) or subsurface strata, or ambient air within the state of Washington.

Exposure: Subjection of an organism to the action, influence or effect of a hazardous substance (chemical agent) or physical agent.

Exposure Pathways: The path a hazardous substance takes or could take from a source to an exposed organism. An exposure pathway describes the mechanism by which an individual or population is exposed or has the potential to be exposed to hazardous substances at or originating from the site. Each exposure pathway includes an actual or potential source or release from a source, an exposure point, and an exposure route. If the source exposure point differs from the source of the hazardous substance, exposure pathway also includes a transport/exposure medium.

Facility: Any building, structure, installation, equipment, pipe or pipeline (including any pipe into a sewer or publicly-owned treatment works), well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock, vessel, or aircraft; or any site or area where a hazardous substance, other than a consumer product in consumer use, has been deposited, stored, disposed or, placed, or otherwise come to be located.

Feasibility Study (FS): A study to evaluate alternative cleanup actions for a site. A comment period on the draft report is required. Ecology selects the preferred alternative after reviewing those documents.

Free Product: A hazardous substance that is present as a nonaqueous phase liquid (that is, liquid not dissolved in water).

Groundwater: Water found beneath the earth's surface that fills pores between materials such as sand, soil, or gravel. In aquifers, groundwater occurs in sufficient quantities that it can be used for drinking water, irrigation, and other purposes.

Hazardous Sites List: A list of sites identified by Ecology that requires further remedial action. The sites are ranked from 1 to 5 to indicate their relative priority for further action.

Hazardous Substance: Any dangerous or extremely hazardous waste as defined in RCW 70.105.010 (5) (any discarded, useless, unwanted, or abandoned substances including, but not limited to, certain pesticides, or any residues or containers of such substances which are disposed of in such quantity or concentration as to pose a substantial present or potential hazard to human health, wildlife, or the environment because such wastes or constituents or combinations of such wastes; (a) have short-lived, toxic properties that may cause death, injury, or illness or have mutagenic, teratogenic, or carcinogenic properties; or (b) are corrosive, explosive, flammable, or may generate pressure through decomposition or other means,) and (6) (any dangerous waste which (a) will persist in a hazardous form for several years or more at a disposal site and which in its persistent form presents a significant environmental hazard and may affect the genetic makeup of man or wildlife; and is highly toxic to man or wildlife; (b) if disposed of at a disposal site in such quantities as would present an extreme hazard to man or the environment), or any dangerous or extremely dangerous waste as designated by rule under Chapter 70.105 RCW: any hazardous substance as defined in RCW 70.105.010 (14) (any liquid, solid, gas, or sludge, including any material, substance, product, commodity, or waste, regardless of quantity, that exhibits any of the characteristics or criteria of hazardous waste as described in rules adopted under this chapter,) or any hazardous substance as defined by rule under Chapter 70.105 RCW; petroleum products.

Hazardous Waste Site: Any facility where there has been a confirmation of a release or threatened release of a hazardous substance that requires remedial action.

Independent Cleanup Action: Any remedial action conducted without Ecology oversight or approval, and not under an order or decree.

Initial Investigation: An investigation to determine that a release or threatened release may have occurred that warrants further action.

Interim Action: Any remedial action that partially addresses the cleanup of a site.

Mixed Funding: Any funding, either in the form of a loan or a contribution, provided to potentially liable persons from the state toxics control account.

Model Toxics Control Act (MTCA): Washington State's law that governs the investigation, evaluation and cleanup of hazardous waste sites. Refers to RCW 70.105D. It was approved by voters at the November 1988 general election and known as Initiative 97. The implementing regulation is WAC 173-340.

Monitoring Wells: Special wells drilled at specific locations on or off a hazardous waste site where groundwater can be sampled at selected depths and studied to determine the direction of groundwater flow and the types and amounts of contaminants present.

Natural Background: The concentration of hazardous substance consistently present in the environment which has not been influenced by localized human activities.

National Priorities List (NPL): EPA's list of hazardous waste sites identified for possible long-term remedial response with funding from the federal Superfund trust fund.

Owner or Operator: Any person with any ownership interest in the facility or who exercises any control over the facility; or in the case of an abandoned facility, any person who had owned or operated or exercised control over the facility any time before its abandonment.

Polynuclear Aromatic Hydrocarbon (PAH): A class of organic compounds, some of which are long-lasting and carcinogenic. These compounds are formed from the combustion of organic material and are ubiquitous in the environment. PAHs are commonly formed by forest fires and by the combustion of fossil fuels.

Potentially Liable Person (PLP): Any person whom Ecology finds, based on credible evidence, to be liable under authority of RCW 70.105D.040.

Public Notice: At a minimum, adequate notice mailed to all persons who have made a timely request of Ecology and to persons residing in the potentially affected vicinity of the proposed action; mailed to appropriate news media; published in the local (city or county) newspaper of largest circulation; and opportunity for interested persons to comment.

Public Participation Plan: A plan prepared under the authority of WAC 173-340-600 to encourage coordinated and effective public involvement tailored to the public's needs at a particular site.

Recovery By-Products: Any hazardous substance, water, sludge, or other materials collected in the free product removal process in response to a release from an underground storage tank.

Release: Any intentional or unintentional entry of any hazardous substance into the environment, including, but not limited to, the abandonment or disposal of containers of hazardous substances.

Remedial Action: Any action to identify, eliminate, or minimize any threat posed by hazardous substances to human health or the environment, including any investigative and monitoring activities of any release or threatened release of a hazardous substance and any health assessments or health effects studies.

Remedial Investigation: A study to define the extent of problems at a site. When combined with a study to evaluate alternative cleanup actions it is referred to as a Remedial Investigation/Feasibility Study (RI/FS). In both cases, a comment period on the draft report is required.

Responsiveness Summary: A compilation of all questions and comments to a document open for public comment and their respective answers/replies by Ecology. The Responsiveness Summary is mailed, at a minimum, to those who provided comments and its availability is published in the Site Register.

Risk Assessment: The determination of the probability that a hazardous substance, when released into the environment, will cause an adverse effect in exposed humans or other living organisms.

Sensitive Environment: An area of particular environmental value, where a release could pose a greater threat than in other areas including: wetlands; critical habitat for endangered or threatened species; national or state wildlife refuge; critical habitat, breeding or feeding area for fish or shellfish; wild or scenic river; rookery; riparian area; big game winter range.

Site: See Facility.

Site Characterization Report: A written report describing the site and nature of a release from an underground storage tank, as described in WAC 173-340-450 (4) (b).

Site Hazard Assessment (SHA): An assessment to gather information about a site to confirm whether a release has occurred and to enable Ecology to evaluate the relative potential hazard posed by the release. If further action is needed, an RI/FS is undertaken.

Site Register: Publication issued every two weeks of major activities conducted statewide related to the study and cleanup of hazardous waste sites under the Model Toxics Control Act. To receive this publication, please call (360) 407-7200.

Surface Water: Lakes, rivers, ponds, streams, inland waters, salt waters, and all other surface waters and water courses within the state of Washington or under the jurisdiction of the state of Washington.

TCP: Toxics Cleanup Program at Ecology

Total Petroleum Hydrocarbons (TPH): A scientific measure of the sum of all petroleum hydrocarbons in a sample (without distinguishing one hydrocarbon from another). The “petroleum hydrocarbons” include compounds of carbon and hydrogen that are derived from naturally occurring petroleum sources or from manufactured petroleum products (such as refined oil, coal, and asphalt).

Toxicity: The degree to which a substance at a particular concentration is capable of causing harm to living organisms, including people, plants and animals.

Underground Storage Tank (UST): An underground storage tank and connected underground piping as defined in the rules adopted under Chapter 90.76 RCW.

Washington Ranking Method (WARM): Method used to rank sites placed on the hazardous sites list. A report describing this method is available from Ecology.