



STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

| | | |
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| IN THE MATTER OF COMPLIANCE BY |) | |
| U.S. OIL & REFINING CO. |) | ORDER |
| with Chapter 70.105D RCW and the |) | No. DE 91TC-S198 |
| Rules and Regulations of the |) | First Amendment |
| Department of Ecology |) | |

To: Mr. Alan J. Cabodi, Vice President Manufacturing
 U.S. Oil & Refining Co.
 3001 Marshall Avenue
 Post Office Box 2255
 Tacoma, WA 98421-2255

Agreed Order No. DE 91TC-S198, dated November 25, 1991, is hereby amended as follows:

Insert the following in Section IV - Work to be Performed section of the Order:

Perform an Interim Action at the Site, per WAC 173-340-430, to remove crude oil contaminated soils and further characterize the nature of ground water contamination resulting from the presence of crude oil in site soils. The Interim Action shall include:

1. Submit an Interim Action Report (Plan), for Ecology review and approval, that addresses the requirements of WAC 173-340-430(6). Compliance with subsection WAC 173-340-430(6)(b)(i) and (ii) can be met by submittal of the Final Interim Phase I Remedial Investigation Report.

Schedule: A draft plan shall be provided for Ecology review within six (6) weeks after the effective date of this amendment. A final version shall be executed within two weeks after Ecology approval of the draft.

2. In accordance with the Ecology approved Interim Action Plan, remove and dispose of contaminated soils to cleanup levels as approved in the Interim Action Plan. Work shall be conducted in compliance with all local, state, and federal regulations, including, but not limited to, WAC 173-340-400(7). An as-built report shall be prepared and submitted, at the completion of construction, which documents the work performed.

Schedule: Work to be performed in accordance with the schedule contained in the final approved Interim Action Plan.

Mr. Alan J. Cabodi
Agreed Order No. DE91TC-S198
First Amendment
Page 2

3. In accordance with the Ecology approved Interim Action Plan, develop data to further characterize the areal extent and expected fate and transport of contaminants in groundwater on and off-site.

Schedule: Work to be performed in accordance with the schedule contained in the final approved Interim Action Plan.

4. Develop a strategy to monitor groundwater quality in order to determine the effectiveness of the soils cleanup, in relation to attaining groundwater cleanup standards, to assure compliance with the approved cleanup standards for the Site. Results of this portion of the work may be integrated into the final RI/FS Report for the site.

Schedule: This task shall be performed according to the schedule for Task 6 - Final RI/FS Report, included in the original Agreed Order.

Included by reference in the above requirements are the Interim Action Plan Outline, dated May 4, 1993, prepared by Dalton, Olmsted & Fuglevand, Inc. and the Comments on that document, dated May 20, 1993, prepared by Ecology, attached hereto as Exhibits A & B, respectively.

Per WAC 173-340-430(5), Public Notice shall be provided by Ecology according to WAC 173-340-600(15).

Per Ecology Interim Policy 130A, a SEPA Threshold Determination shall be made prior to start-up of the Interim Action. The City of Tacoma will serve as lead agency in conducting the SEPA review; point of contact is Mr. Peter Katich, City of Tacoma Dept. of Public Works, Building and Land Use Services Division.

No other condition or requirement of this Order is affected by this amendment.

DATED this 29th day of June, 1993 at Olympia, Washington.

By: Alan J. Cabodi
Alan J. Cabodi
Vice President, Manufacturing
U.S. Oil & Refining Co.

By: Megan White
Megan White, P.E.
Southwest Region Supervisor
Toxics Cleanup Program

Duke, O'Connell & Fugere, Inc.U.S. Oil & Refining Co. - Interim Action Plan Outline
May 4, 1993 Page 2**INTERIM ACTION PLAN OUTLINE****I. INTRODUCTION**

- 1.1 Purpose and scope (DOF- respond to WAC 173-340-430 (1)(a)(b)(c))
- 1.2 Background (DOF -from Interim Phase 1 Report)
- 1.3 Site Location and Ownership (DOF - from Interim Phase 1 Report)
- 1.4 Description of Previous Work and Existing Site Conditions (DOF - from Interim Phase 1 report)

II. DESCRIPTION OF INTERIM ACTION

- 2.1 Description of Interim Action (USO)
- 2.2 Alternative Interim Actions Which Were Evaluated & Why The Proposed Action Was Selected (USO/DOF?)
- 2.3 Cleanup Levels (DOF)
- 2.4 Permitting (Excavation/Grading? SEPA?) (USO)

III. IMPLEMENTATION OF INTERIM ACTION

- 3.3 Excavation (staging, equipment, procedures, stockpiling, erosion/dust control etc.) (USO)
- 3.4 Backfilling (material and procedures) (DOF)
- 3.5 Transportation and Disposal (trucks, railcars, etc.) USO
- 3.6 Decontamination Procedures (USO)

IV. CONSTRUCTION DOCUMENTATION AND REPORTING (DOF)**V. SCHEDULE (USO)****APPENDIX A - Compliance Monitoring Plan (DOF)****APPENDIX B - Health & Safety Plan (USO)****APPENDIX C - Sampling and Analysis Plan (DOF)**

This assumption can be validated in the course of performing additional groundwater characterization and monitoring. This will be needed to further identify the extent of groundwater contamination and to determine what remedial action will be appropriate for the groundwater problem, in any case.

Bearing all this in mind, your proposal to undertake an Interim Action in accordance with WAC 173-340-430 is well reasoned. However, in addition to removing the contaminated soil to a reasonable cleanup level, the migration of lighter end constituents in the groundwater must be addressed, as well. Groundwater contamination, whether potential receptors are drinking water, direct contact, aquatic organisms, etc. will be the real determinant in assessing cleanup success.

Further characterization of the contaminant plume to the east of the original spill area will be needed. Factors to be considered would include:

Contaminant flow directions, velocity, and volumetric extent.

Potential surface water receptors, e.g., Lincoln Ditch and Blair Waterway.

Migration enhancement by utility corridors, subgrade pipelines, and stormwater conveyances (including groundwater infiltration of the latter).

Possible remedial measures to mitigate the groundwater contamination to the cleanup levels required. (Anticipate anything from "No Further Action" to groundwater treatment as the universe of possibilities.)

Institutional Controls that may be have to be implemented for properties in addition to the current site. (See WAC 173-340-440)

These factors can be determined as part of the Interim Action, the results becoming elements of the final RI/FS Report.

INTERIM ACTION PLAN OUTLINE

EXHIBIT B

In general, the Interim Action Plan Outline responds well to the soil cleanup phase of the anticipated interim action. The following comments include some specific issues that should be addressed in the plan; I make note of them here in hopes that the interim action can be demonstrably as comprehensive as possible. In addition, the comments include items that should be included in the plan to address the groundwater contamination during the course of the interim action.

| Outline Item | Comment |
|--------------|---|
| 1.1 | Respond also to WAC 173-340-430(2)(a), in view of the fact that the interim action should also address a strategy to deal with residual contamination in the groundwater. |

Comments
Page 5

- 2.1 Include in the description, in addition to the soil work to be done, additional offsite hydrology & groundwater characterization and groundwater monitoring to eventually confirm cleanup efficacy.
- 2.3 Include a discussion of the rationale used for setting the cleanup levels according to the marine aquatic standards (& 100x that for soil). Also include a discussion of why a TPH soil cleanup level of 1000 mg/kg should be protective of the groundwater, at the groundwater cleanup levels chosen.
- Add Sect. II? Include descriptions of additional groundwater characterization activities, e.g., well construction, sampling and testing, longer term monitoring.
- Add Sect. IV or V? Describe groundwater testing and monitoring documentation and reporting procedures.
- Appendix C Be sure both soil cleanup verification and the additional groundwater characterization and monitoring are included in this part.

As regards Point of Compliance (POC) for the cleanup standards to be met, the final decision on that will be most appropriately addressed in the final Cleanup Action Plan. Some of the POC decision making factors may be influenced by things we learn during the interim action. Please review WAC 173-340-745(6) (= section 740) and 720(6) for the pertinent guidance.

Based on current knowledge, it would appear that the soil POC will be essentially throughout the site where oil contamination is visibly obvious (subsection 740(6)(b)). The groundwater POC would appear to be from the source to the outer boundary of the contaminant plume (subsection 720(6)(a)), although "conditional points of compliance" can be established elsewhere, such as at the site property boundary. We will need to consider the impact of a conditional POC due to the possible ramifications that might have on getting institutional control restrictions lifted eventually. To that point, please review WAC 173-340-440(7).

Please let me know if you have any questions regarding the above.

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