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

JUL 11 2002

RECEIVED
JUL 12 2002
DEPT OF ECOLOGY

Reply To
Attn Of: WCM-126

Mr. Ching Pe
Washington Dept. of Ecology
Northwest Regional Office
3190 - 160th Ave., S
Bellevue, WA 98008-5452

Enclosed is a flowchart which should have been part of Enclosure C with EPA's letter of July 8, 2002, to Ms. RueAnn Thomas of J.H. Baxter & Co.

Re: **Approval with Modification,**
Partial Disapproval and Conditions of Approval of
the May 15, 2002, Revision 2, Site Investigation Work Plan
J.H. Baxter & Co., Arlington, Washington Facility
Administrative Order on Consent (Order)
Docket No.: RCRA-10-2001-0086
EPA ID No.: WAD 05382 3019

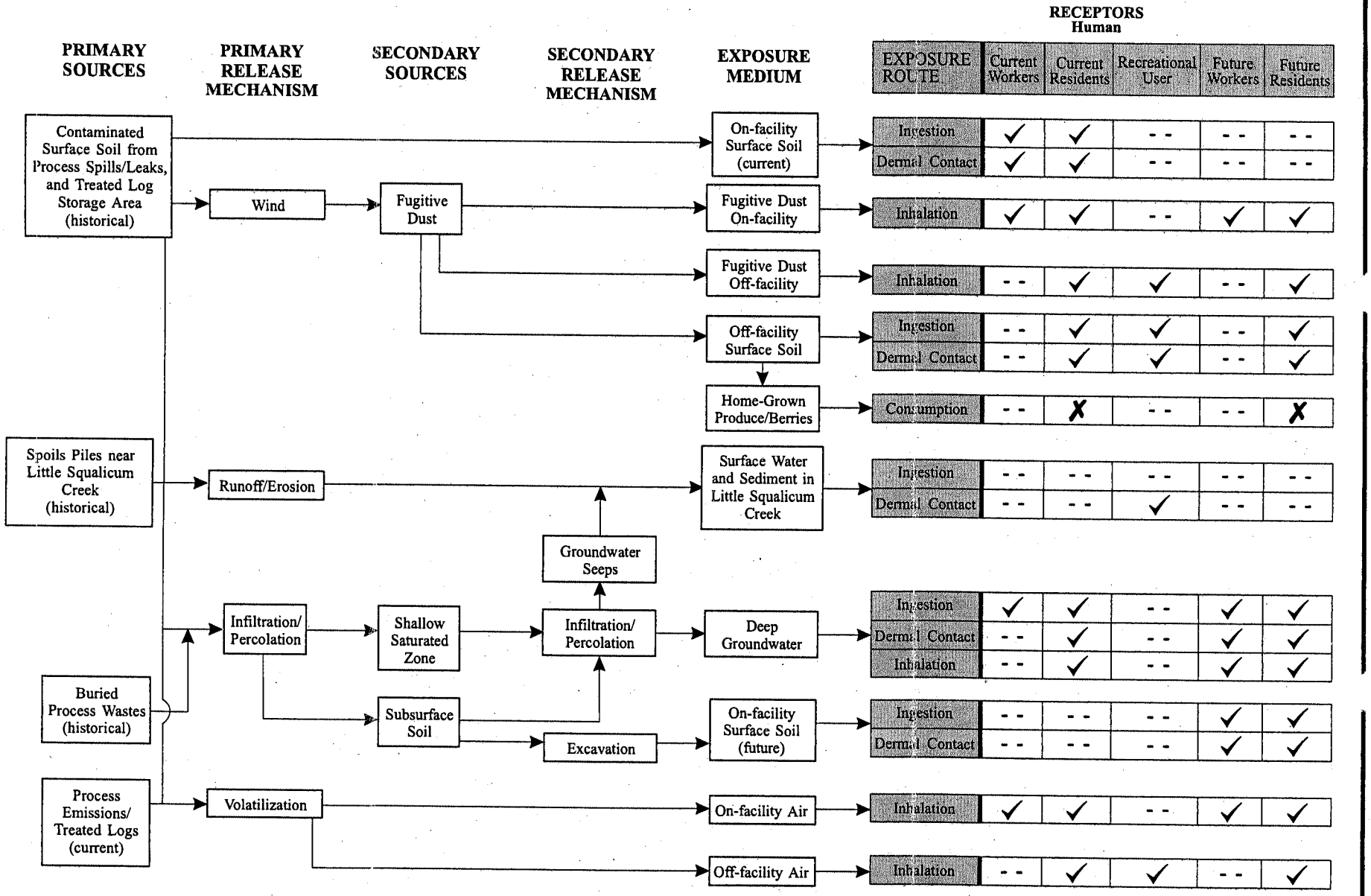
signed by Kimberly A. Ogle.

Please excuse the delay.

Sincerely,

John J. Friedingsdorf
Office Manager
RCRA Compliance Unit

Enclosure



ecology and environment, inc.
International Specialists in the Environment
Seattle, Washington

LEGEND
✓ = Complete Pathway Evaluated in the Risk Assessment
✗ = Evaluated in the Screening Process, but not quantified in the Risk Assessment
- - = Incomplete Exposure Pathway

Past and Present Conditions

Figure 3-1
HUMAN HEALTH
CONCEPTUAL SITE MODEL

Date: 1/28/02 | Drawn by: AES | 10:START-2\01030016\fig 3-1

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

JUL 8 2002

Reply to
Attn of: WCM-126

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Ms. RueAnn Thomas,
Environmental Programs Director
J.H. Baxter & Co.
85 North Baxter Road
Eugene, OR 97402

Re: **Approval with Modification,**
Partial Disapproval and Conditions of Approval of
the May 15, 2002, Revision 2, Site Investigation Work Plan
J.H. Baxter & Co., Arlington, Washington Facility
Administrative Order on Consent (Order)
Docket No.: RCRA-10-2001-0086
EPA ID No.: WAD 05382 3019

Dear Ms. Thomas:

The United States Environmental Protection Agency (EPA) has completed its review of the above-referenced revised work plan. In accordance with Section XII (EPA Approval of Plans and Other Submittals) of the Order, EPA hereby approves upon conditions specified in Enclosure C the majority of the work plan as modified by Enclosure A, and disapproves specific portions of the work plan specified in Enclosure B.

For the portions of the work plan that are approved upon the conditions in Enclosure C and modified in Enclosure A, pursuant to paragraphs 73 and 74(b) of the Order, implement the work plan in accordance with those conditions, modifications and the schedule contained in the work plan upon receipt of this approval.

For those portions of the work plan that EPA is disapproving (Enclosure B), Baxter must, pursuant to paragraphs 74 and 75 of the Order, within thirty (30) days of receipt of this letter, correct the deficiencies in accordance with EPA's comments and resubmit those portions of the work plan as an addendum to the work plan. For the disapproved sections of the work plan, Baxter is subject to stipulated penalties for its failure to provide EPA with a work plan in which all portions are of acceptable quality to EPA. Paragraph 74 states that pursuant to Section XVIII (Stipulated and Statutory Penalties), stipulated penalties shall continue to accrue during the period of time that the Respondent is given to correct the deficiencies.

Regarding the conditions of approval provided in Enclosure C, no response from Baxter is necessary unless specifically requested within the statement of condition. Please provide any requested response(s) within fifteen (15) days of receipt of this letter. Because the approval of this work plan is conditioned upon Baxter's compliance, failing to comply with these conditions may lead to EPA's revocation of this approval and the assessment of stipulated penalties for failing to comply with requirements of the Order (see paragraph 77 of the Order).

If you have any questions regarding this letter, please call me at (206) 553-0955. If your questions are of a legal nature, please have your legal counsel contact Jennifer MacDonald at (206) 553-8311.

Sincerely,

Kimberly A. Ogle
Project Manager

Enclosures

cc: Georgia Baxter, J.H. Baxter & Co., San Mateo, CA
Mary Larson, J.H. Baxter and Co., Arlington WA
Les Brewer, Premier Environmental, Portland, OR
Shawn R. T. Severn, Premier Environmental, Las Vegas, NV
Jeanne Tran, NWRO
Dean Yasuda, NWRO
Ching Pi, NWRO
Dave Misko, NWRO (w/out enclosures)
Sara Beth Watson, Steptoe & Johnson LLP

ENCLOSURE A

EPA MODIFICATIONS TO
May 15, 2002, Site Investigation Work Plan,
J.H. Baxter & Co., Arlington, Washington Facility, Revision 2

Note: Modifications to the work plan provided by EPA below may also be applicable to other similar or related sections of the work plan. Where this is the case but not expressly stated below, EPA hereby extends these modifications to similar or related sections of the work plan.

1. Table of Contents, Page i: The Table of Contents is hereby modified to include Appendix A entitled, "Historical Site Data, Revision 2" and Appendix B entitled, "Sampling and Analysis Data Management Plan, Revision 2".

2. Section 2.3.4, Process Units and Air Emission Sources, Pages 2-5 through 2-7: EPA does not necessarily agree with the regulatory interpretations made by Baxter in this section and will not imply concurrence on this interpretation by approving this section. Therefore, EPA is hereby modifying this section as follows: After the first two sentences, the rest of this section up to the last paragraph that begins "Table 2.1 also lists . . ." is deleted from the work plan. The following sentence is inserted above the last paragraph: "Baxter believes that certain units that handle wastewater may be exempt from RCRA requirements and therefore from Subparts AA and BB of 40 C.F.R. 265."

3. Section 2.4.1, Catch Basins/Drains and Drainage Ditches, the last two sentences on Page 2-7 are hereby deleted.

4. Section 2.4.2, Stormwater Discharge Permits, Page 2-8: The last sentence of this section is hereby modified to read,, "The State Waste Discharge permit requirements include periodic water quality monitoring of selected storm catch basins and groundwater monitoring wells."

5. Section 2.5, Hazardous Waste Management, Page 2-9: The sentence in this section that reads, "Baxter recycles and reuses process residuals and wastewater in accordance with RCRA." is hereby deleted. EPA does not necessarily agree with this statement and, in addition, the sentence is inaccurate in that some "residuals" are also disposed of versus recycled or reused.

6. Section 4.4, Local Hydrogeology, Page 4-3: This section is hereby modified to include the following sentence at the end of the second paragraph: "However, valid groundwater data collected between 1988 and 1994 will be included in the Site Investigation Report, if appropriate." The rationale for this modification is that data are not precluded from use on the basis that they were collected "irregularly". There is no other basis to exclude these data.

7. Figures 5-7 and 8-1: The highest concentration for PCP in stormwater is for a sample obtained from catch basin CB 4. The proposed soil boring (SB-55) is approximately 200 ft. to the north. The work plan is hereby modified to locate SB-55 100 feet closer to CB 4 to better characterize the previously detected high concentration.

8. Section 8.1.1.1, Task 1.1 - Soil Investigation: Dioxins and furans must be analyzed in a subset of samples distributed across the site. Although the concentrations for these constituents is usually low, these compounds often contribute greatly to site risks because of their relatively high toxic potency. For samples that will be collected *on-site*, the work plan proposes no dioxin/furan samples in the Main Treatment Area, three samples selected randomly in the Treated Pole Storage Area, and two samples in the Untreated Pole Storage Area. In addition, one sample of process water will be collected and analyzed for dioxins and furans.

   Instead of the proposal to select these samples randomly, EPA hereby modifies the proposal by specifying the sample locations for the on site sampling and analysis for dioxins/furans in soils by inserting the following: "Four soil samples will be obtained for dioxins/furans analysis in the Treated Pole Storage Area and the Main Treatment Area. One sample will be collected in the north quadrant of the Treated Pole Storage Area, one in the west quadrant of the Treated Pole Storage Area, one in the east quadrant of the Treated Pole Storage Area and one in the Main Treatment Area. For purposes of site characterization, analysis of process water for dioxins/furans is not necessary. Baxter may choose to collect and analyze the process water for dioxins/furans for other data objectives."

   EPA's specification of sample location in the Treated Pole Storage Area and Main Treatment Area are the only modifications EPA is making regarding the proposed sampling at the facility.

   EPA reminds Baxter, as it has in previous correspondence, that very little if any conclusions can be reached regarding only four data points. Given that twenty background off-site soil samples will be collected and analyzed for dioxins/furans and only four will be collected from the Treated Pole and Main Treatment Areas, no statistical comparison between the two data sets can be made. Additional samples are necessary if Baxter wants to conduct any statistical analysis on the distribution of dioxins/furans across the facility as they compare to background levels.

9. Section 9, Page 9-1 and Appendix B, Sampling and Analysis Data Management Plan, Revision 2 Section D1, Page B-84: The current version of the "USEPA National Functional Guidelines for Organic Data Review" is dated October, 1999. Both the 1994 and 1999 versions are referenced in the work plan and/or quality assurance project plan. The 1994 reference is hereby deleted.

10. Section 10, Report Preparation, second bullet, Page 10-1: The second bullet is hereby modified to read, "Data collection during the SI, including visual observations, and relevant . . . ."

ENCLOSURE B

DISAPPROVAL COMMENTS
on Specific Portions of the May 15, 2002, Site Investigation Work Plan, J.H. Baxter & Co., Arlington, Washington Facility, Revision 2

Note: Disapproval of portions of the work plan provided by EPA below may also be applicable to similar or related sections of the work plan. Where this is the case, but not expressly stated below, EPA hereby extends these disapproval comments to similar or related sections of the work plan. Section 5.6, Air, is hereby disapproved in its entirety. The following comments must be addressed in the revision of this section.

1. Section 5.6, Air, Page 5-11: This section describes the stack emission testing performed at Baxter's Eugene facility. EPA has two issues with the use of this modeling: First, this testing was done in 1989 and was limited to the retort stack . Figure 6-2 shows a variety of potential emissions sources in addition to the retort stack during the Boulton cycle and the Final Vacuum cycle. Because fugitive emissions from other sources have not been quantified and thus cannot be accounted for in the air modeling activity, the air modeling activity cannot predict emissions for the whole site as required. Secondly, additional documentation of the processes at both the Eugene and the Arlington facilities would be needed to support use of data from Eugene as a surrogate for modeling emissions at Arlington. Surrounding buildings, wind rose and topography would have to be evaluated in order to calculate the location and exposure of the Maximum Exposed Individual (MEI).

2. Section 5.6, Air, Page 5-12: The emissions data Baxter refers to were collected from the retort stack during the "Boulton Cycle" and "Final Vacuum cycle". Providing data for the retorts when the doors are opened would also be relevant to actual facility emissions. The information in Table 2-1 must be considered in the evaluation of air emissions at the facility in accordance with the Site Investigation requirements of the Order. EPA is not convinced, based on what is presented in the work plan, that air emissions are "minimal" as stated in the work plan.

3. Table 5-6: Although the pentachlorophenol (PCP) detected in the sorbent tube of one worker was less than the OSHA limits, the concentration detected exceeds the risk-based preliminary remediation goal (PRG) in ambient air for residents by a factor of about 285. This implies that if residents were exposed continually to that level of PCP in air, their risk may be as high as 3×10^{-4}. Although air concentrations decrease dramatically with distance from the source, detections at this concentration indicate that additional analysis (and perhaps air monitoring) is warranted. The detection limits for other workers (i.e., $0.003 mg/m^3$) are above the PRG for ambient air (i.e., $0.056 \mu g/m^3$ or $0.000056 mg/m^3$).

Note: A revision to Section 6.4.3 is necessary. In addition to what is already presented, this section must be revised to include the following potential pathways:

4. Section 6.4.3, first bullet: Because on-site receptors are within the scope of a risk assessment, direct exposure to current and potential future on-site receptors must also be evaluated.

5. Section 6.4.3, second bullet: In addition to vapors, particulate from windblown dust also could be deposited onto the ground.

6. Section 6.4.3, third bullet: OSHA workplace limits are not based on potential human health risk. Therefore, assessment of the inhalation exposure pathway is warranted using current toxicological data for COPCs.

Note: A revision to Section 8.4 is necessary. The revision must consider and incorporate the following comments:

7. Section 8.4: The stack testing done at the Eugene facility was focused on the stack of the retort during the "Boulton Cycle" and the "Final Vacuum Cycle" and does not account for the variety of fugitive emission sources on the Arlington facility. Therefore, air modeling is not likely to represent the actual total air releases from the Arlington facility.

8. Section 8.4.2: Although chemicals detected in surface soil or surface water indicate some of the chemicals that may be released to air, it is possible that the volatile fraction would not be detected in other media (such as soil or water if released by the retorts). Therefore, restricting the list to previously detected chemicals is not appropriate and must be modified. Additional chemicals include but are not limited to: naphthalene, benzene, and trimethylbenzenes. Revise Table 9-1 accordingly.

9. Additional detail must be provided on how inhalation of fugitive dust will be assessed.

10. EPA's meteorologists reviewed the proposed data set and concluded that because the hourly meteorological data may not be representative of site conditions, a screening approach (i.e., using the computer program SCREEN3) may be more appropriate. The work plan must be revised to use SCREEN3 which can handle a variety of sources and may provide more representative emissions data for use in the risk modeling.

Receptors on-site must be evaluated for current and potential future use scenarios.

11. Section 8.4.4.2: The cited sources of meteorological data may not be appropriate for this facility. A screening model, as described above, may be more appropriate given the current data limitations.

12. Section 8.4.5: In addition to PCP and dioxins/furans, samples off-site must be analyzed for PAHs.

ENCLOSURE C

CONDITIONS OF APPROVAL
for the May 15, 2002, Site Investigation Work Plan, J.H. Baxter & Co., Arlington, Washington Facility, Revision 2

Note: Conditions specified below may also be applicable to similar or related sections of the work plan. Where this is the case, but not expressly stated below, EPA hereby extends these conditions to similar or related sections of the work plan.

1. The activities conducted by implementing this approved work plan and modifications represent the first phase of the field work. Additional phases of work may be necessary to fully characterize the contamination at this site. EPA notes that the work plan mentions a phased approach in various places and is hereby approving the work plan on the condition that additional phases of data collection must be implemented if determined to be necessary by EPA or Baxter.

2. Several comments previously made by EPA have, by mutual consent, not been directly incorporated into the revised work plan. The approval of this work plan is contingent upon Baxter addressing those comments in the Site Investigation Report versus the work plan as agreed to by EPA.

3. Section 5.1, Surface Soils, Page 5-2: The text indicates that existing soil data consists of twenty-three (23) samples; however, as broken down, only twenty-two (22) are accounted for (i.e., four (4) obtained in 1992 by Ecology, twelve (12) from a 1999 Baxter Study, and six (6) from borings in the 2.5 to 4-foot depth interval). Please provide an explanation for this discrepancy. In addition, as stated previously by EPA, if surface soil data are to be used for a risk assessment, then a shallower depth interval must be used. Typically, for human health risk assessment, soils from the top six (6) inches to one (1) foot are considered to be surface soils. Therefore, additional sampling may be necessary to conduct an adequate risk assessment.

4. Page 5-2 and throughout the Work Plan: The use of units for concentrations which are used in a comparison, must report the concentrations in the same units. In most cases the concentrations will be in microgram per liter (µg/L) or microgram per kilogram (µg/Kg).

5. Section 5.4, Pore Water, Page 5-8: Provide a definition of the term, "pore water" and a reference from the literature. It is not clear if the term, as being used here, is limited to the lysimeters or if the term is being used in the broader context of site characterization.

6. Section 6: Provide a risk assessment-specific conceptual site model (CSM) that depicts potential migration pathways, exposure routes, potentially exposed receptors, and exposure pathways. Typically on the right hand side of this model, a list of receptors is provided with all the possible exposures they may experience (e.g., ingestion of soil,

inhalation of dust). This type of CSM is used to ensure that data needed to support a risk assessment is obtained. An example is attached to this enclosure

7. Section 8.3.1.2, Task 3.1.2, Surface Soils, Page 8-18: In general, modifications to this section reflect discussions at meetings between Baxter and EPA personnel. However, the surface soil sampling description remains confusing. Baxter must ensure that the field samplers clearly understand what is to be done and carefully document what is done in the field. Data resulting from sampling that cannot be documented may be rejected and require recollection.

8. Figure 4-5: The data used in this figure ends with the year 2000. Baxter must ensure that future submittals include all data collected to present.

9. Table 9-1, MTCA Method A levels for TPH-Diesel must be added to this table. For groundwater, the level is 500 µg/L and for soil the level is 2,000 mg/kg. These are non-specific default clean up levels. Using site-specific data, site specific values (based on various petroleum fractions present) can be determined.