

ENVIRONMENTAL
PROTECTION

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9 May 1997

Mr. Mark Johnson
California Regional Water Quality Control Board
San Francisco Bay Region
2101 Webster Street, Suite 500
Oakland, California 94612

Subject: Comments on Draft Air Monitoring Plan for Remediation of Arsenic-Affected Soils in the Vicinity of the Sherwin-Williams Facility and Addendum to Levine-Fricke-Recon Inc.'s Excavation and Disposal Work Plan for Arsenic-Affected Soils in the Vicinity of the Sherwin Williams Facility, Emeryville, California, dated 25 April 1997 (EKI 970001.85)

Dear Mr. Johnson:

On behalf of our client, Chiron Corporation ("Chiron"), Erler & Kalinowski, Inc. ("EKI") has prepared comments on the following documents related to Sherwin-Williams Company ("SW") proposed excavation of soils along Horton Street in Emeryville:

- *Draft Air Monitoring Plan for Remediation of Arsenic-Affected Soils in the Vicinity of the Sherwin-Williams Facility, Emeryville, California, dated 2 May 1997 ("Air Monitoring Plan"); and*
- *Addendum to Levine-Fricke-Recon Inc.'s Excavation and Disposal Work Plan for Arsenic-Affected Soils in the Vicinity of the Sherwin Williams Facility, Emeryville, California, dated 25 April 1997, dated 8 May 1997 ("Addendum to Excavation Plan").*

These documents were received by EKI on 8 May 1997.

COMMENTS ON AIR MONITORING PLAN

(1) Please provide the exposure assumptions, exposure pathways, and background levels used to calculate the ambient air target level for lead of 0.0007 mg/m^3 . Also, please note that the Proposition 65 notification levels for lead may be lower than the action level of 0.0007 mg/m^3 .

(2) The target levels and action levels for lead and total dust presented in Table 1 are not consistent with the values presented in the text on page 4.

(3) On page 5, the air monitoring plan indicates that a temporary stop-work will be imposed if the total dust action levels are exceeded for a duration of several minutes. However, page 14 of the air monitoring plan indicates that the dust monitors will be visited routinely throughout the day by LFR personnel. Routine visitation of the dust monitors will not allow for continuous observation of dust monitoring results. Therefore, the DataRAMs should be equipped with alarms that are set at the dust action level. If the DataRAM alarms, then LFR personnel can determine if the action levels are exceeded for several minutes.

(4) Page 7 of the air monitoring plan indicates that baseline ambient air monitoring for arsenic and lead was performed in the vicinity of the Sherwin-Williams site on April 16, 17, and 18, 1997. Please provide the results of the baseline ambient air monitoring performed on April 16, 17 and 18, 1997.

(5) Page 9 of the air monitoring plan presents the equipment specifications for the high-volume air samplers. The plan indicates that quartz microfiber filters will be used in place of glass microfiber filters because arsenic is the principle pollutant of concern. Please present the expected detection limits for arsenic and lead in the high volume air samplers and compare the expected detection limits to the target levels.

COMMENTS ON ADDENDUM TO EXCAVATION PLAN

(1) On page 2, paragraph 2 of the Addendum to Excavation Plan, LFR states that the proposed arsenic cleanup-level for deeper soils is based on the assumed distribution of arsenic concentrations in deeper soil and that this distribution is the same as the assumed distribution of arsenic concentrations in shallow soils. Has the distribution of arsenic detected in soil in the vicinity of the SW site been evaluated? If so where have these data been presented and how have they been used to establish the "not-to-exceed" cleanup criteria (e.g., 220 mg/kg) which have been proposed?

(2) On page 2, paragraph 3 of the Addendum to Excavation Plan, LFR states that "The revised cleanup level takes into account ...worker exposure during a one-time future installation of new utility lines for the anticipated expansions on the Chiron property". This statement could imply that the exposure assumptions and proposed soil cleanup levels in the Addendum can be applied to the Chiron Property. This implication is incorrect given that exposure to chemically-impacted soils by future construction workers or other workers on the Chiron Property are likely to be very different than the anticipated restricted exposures to chemically-impacted soils by city or other utility

workers in Horton Street. Therefore soil cleanup-levels for Chiron Properties must be addressed independently.

We recommend that the statement on page 2, paragraph 3 of the Addendum be modified as follows: "The revised cleanup level takes into account ...worker exposure during a one-time future installation of new utility lines in Horton Street. It is anticipated that installation of new utility lines in Horton Street will be conducted in association with Chrion's planned future development in Emeryville."

(3) It should be noted that the proposed "not-to-exceed" cleanup criteria for arsenic in deeper soils of 220 mg/kg is greater than the Cal-OSHA arsenic standard of 200 mg/kg (CCR Title 8 #5214), which may obligate performance of specific Cal-OSHA requirements associated with future work in Horton Street.

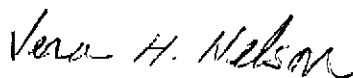
(4) It should also be noted that the estimated daily lead dose, based on proposed soil cleanup levels (e.g., 400 mg/kg) and an assumed ingestion rate of 480 mg/day (U.S. EPA, 1991), to future utility workers on Horton Street is greater than the "no observable effect level" for lead specified in Proposition 65 (22 CCR-12805). Therefore, appropriate notifications to future workers will be required during completion of excavation work in Horton Street.

(5) The assumed respirable dust concentration of 0.05 mg/m^3 used to calculate arsenic concentrations in air (see Table A4 of the Addendum to Excavation Plan) may underestimate actual respirable dust concentrations to which a utility maintenance worker may be exposed. Department of Toxic Substances Control ("DTSC") guidance (DTSC, 1993) recommends use of an airborne respirable dust concentration of a 1.0 mg/m^3 for construction work and other dusty activities (included in Attachment A for reference). Use of this dust concentration results in a higher estimated risk level of 2.8×10^{-6} for a utility worker due to inhalation of respirable dust containing an average arsenic concentration of 130 mg/kg.

If you have any questions, please call.

Very truly yours,

ERLER & KALINOWSKI, INC.



Vera H. Nelson, P.E.
Project Manager

REFERENCES

- DTSC 1993. *Addendum to Chapter 7 of DTSC Supplemental Guidance for Human Health Multimedia Risk Assessments of Hazardous Waste Sites and permitted Facilities: Instructions for DTSC Lead Risk Assessment Spread Sheet Version 2.0., 10 June 1993.*
- U.S. EPA, 1991. *Human Health Evaluation Manual, Supplemental Guidance, Standard Default Exposure Factors*, OSWER Directive 9285.6-03

ATTACHMENTS

- Attachment A - *Addendum to Chapter 7 of DTSC Supplemental Guidance for Human Health Multimedia Risk Assessments of Hazardous Waste Sites and permitted Facilities: Instructions for DTSC Lead Risk Assessment Spread Sheet Version 2.0., dated 10 June 1993*

- cc: Stephen Morse, California Regional Water Quality Control Board
Ravi Arulanantham, California Regional Water Quality Control Board
Susan Hugo, Alameda County Department of Environmental Health
Ric Notini, Chiron Corporation
Richard Raushenbush, Esq., Latham & Watkins
Dave Gustafson, Sherwin-Williams
Larry Mencin, Sherwin-Williams
Mark Knox, Levine-Fricke-Recon
Edward Sangster, Esq., McKenna & Cuneo
Alan Danzig, Esq., Sherwin Williams
Tom Dunkelman, U.S. Environmental Protection Agency
Barbara Cook, Department of Toxic Substances Control
Ignacio Dayrit, City of Emeryville
Mark E. Stelljes, SECOR
Jim Ritchie, SECOR
Mara Feeney, Mara Feeney & Associates

ATTACHMENT A

Addendum to Chapter 7 of DTSC Supplemental Guidance for Human Health Multimedia
Risk Assessments of Hazardous Waste Sites and permitted Facilities: Instructions for
DTSC Lead Risk Assessment Spread Sheet Version 2.0.

DEPARTMENT OF TOXIC SUBSTANCES CONTROL

400 P Street, 4th Floor
P.O. Box 806
Sacramento, CA 95812-0806

June 10, 1993



To: Interested Parties

Enclosed at your request are a diskette containing a copy of the spreadsheet and a copy of "Assessment of health risks from inorganic lead in soil", which provides the technical documentation for the spreadsheet.

"Assessment of health risks from inorganic lead in soil" is Chapter 7 of Supplemental Guidance for Human Health Multimedia Risk Assessments of Hazardous Waste Sites and Permitted Facilities, a manual supplementing the U.S. Environmental Protection Agency (EPA) Superfund, Volume I, Human Health Evaluation Manual (Part A), Interim Final (EPA/540/1-89/002, December 1989) and directives from the U.S. EPA Office of Solid Waste and Emergency Response (OSWER). The table of contents for this guidance manual is:

- Chap 1 Default exposure parameters
- Chap 2 Use of soil concentration data in exposure assessment
- Chap 3 Documentation and assumptions used in the decision to include and exclude pathways
- Chap 4 Documentation of methodologies, justification, input, assumptions, limitations, and output for exposure models
- Chap 5 Selection, use, and limitations of indicator chemicals for evaluation of exposure to complex waste mixtures
- Chap 6 withdrawn from the manual
- Chap 7 Assessment of health risks from inorganic lead in soil
- Chap 8 DDT in soil: guidance for the assessment of health risk to humans
- Chap 9 A toxicity equivalency factor procedure for estimating 2,3,7,8- tetrachlorodibenzo-p-dioxin equivalents in mixtures of polychlorinated dibenzofurans

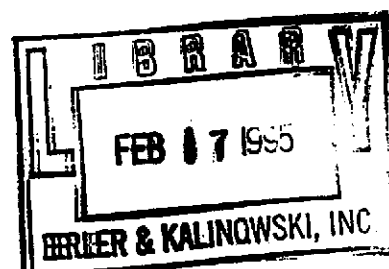
Copies of this manual may be ordered from:
California Department of Toxic Substances Control
Office of Scientific Affairs
P.O. Box 806
Sacramento, CA 95812-0806

for \$50.00 which includes handling and shipping charges. Checks should be made out to the California Department of Toxic Substances Control.

A. Kimiko Klein

A. Kimiko Klein, Ph.D.
Staff Toxicologist
(916) 323-3767

Enclosure



Addendum to chapter 7 of DTSC Supplemental Guidance for Human Health Multimedia Risk Assessments of Hazardous Waste Sites and Permitted Facilities:

INSTRUCTIONS FOR DTSC LEAD RISK ASSESSMENT SPREADSHEET Version 2.0

The enclosed Excel[®] spreadsheet is the latest iteration of the DTSC Lead Risk Assessment Spreadsheet. The file name is bloodpb5.xls. The principal changes in this version are the incorporation of back-calculated Preliminary Remedial Goals (PRG), the separation of the input parameters from the blood lead input equations, and the incorporation of an industrial commercial scenario. This abbreviated set of instructions is not intended to stand alone, but assumes that the user has chapter 7 of DTSC Supplemental Guidance for Human Health Multimedia Risk Assessments of Hazardous Waste Sites and Permitted Facilities (guidance).

Environmental data are entered in cells C7 through C11, and the estimated blood lead concentrations are displayed in cells G8 through K11. PRG are displayed in cells L8 through L11. Each of the four PRG values in column L should result in a 99th percentile blood Pb of 10 for the corresponding exposure scenario when entered in cell c8. Please advise OSA of any deviation from this result.

Block A37 through J57 contains the pathway equations for the four scenarios and the breakdown of exposure by pathway.

Exposure parameters are in the A14 through G35 block. The parameters for residential exposures should, in most cases, remain at default values. The industrial exposure parameters are more likely to vary according to the specific situation, but all changes from default values must be justified. Default values for the residential scenarios are in the guidance. Parameters for industrial exposures are the same as for adult residents except:

airborne dust 1000 ug/m³ (construction, farming, or other dusty environments)⁽¹⁾
plant uptake no⁽²⁾
days per week 5⁽³⁾
skin area 5800 cm² (outdoor occupations)⁽⁴⁾
soil ingestion 240 mg/day (construction, farming, or other occupations with high soil contact)⁽⁵⁾

- (1) Dust measurements at construction sites have shown levels of 1000 ug/m³ or higher.
- (2) It is reasonable to assume that people do not grow produce at work (except farming).
- (3) The normal work week is five days.
- (4) This represents the average area of arms, hands, shoulders, neck and face.
- (5) The exposure factors handbook lists a value of 480 mg/day, which is assumed to be a reasonable maximum value. Since this method uses median estimates and then considers the output distribution, we have taken one-half that value as an estimate of a median value.