

DOSH DIRECTIVE

Department of Labor and Industries
Division of Occupational Safety and Health
Keeping WA workers safe.

33.27

Cholinesterase Monitoring

Date: January 12, 2011

I. Purpose

This directive establishes procedures for responding to action level cholinesterase depressions under Chapter 296-307-148 WAC, Cholinesterase Monitoring.

II. Scope and Application

This directive applies to DOSH operations statewide. It replaces all previous direction, whether formal or informal.

III. References

- WAC 296-307-148, Cholinesterase Monitoring
- Chapter 296-307 WAC, Part I, Pesticides (Worker Protection Standard)
- DOSH Consultation Manual
- DOSH Compliance Manual
- Cholinesterase Monitoring for Agricultural Pesticide Handlers: Guidelines for Health Care Providers in Washington State

IV. Background

- A. The Washington State Department of Labor and Industries adopted WAC 296-307-148, Cholinesterase Monitoring, in October 2003. An updated rule was adopted on December 20, 2005 with an effective date of February 1, 2006.

Included in the initial implementation process, the legislature, under Title 49.17.288, required the Department to collect data related to cholinesterase monitoring and provide annual summary reports. The last of these reports was due January 1, 2007. Even though formal data collection and analysis was no longer required after 2006, the Department saw benefit in continuing to collect data and provide consultation services in response to each action level cholinesterase depression (>20% from individual baseline).

The 2008-2010 cholinesterase monitoring seasons have resulted in a maturing of the cholinesterase monitoring program. Most significantly, the number of action level cholinesterase depressions have leveled out to <15/yr, and many of the growing operations experiencing action level cholinesterase depressions had received consultation services related to a previous action level cholinesterase depression.

Considering the above, the Department feels that it is appropriate to shift from a primarily consultation approach to action level cholinesterase depressions, and conduct enforcement investigations when circumstances indicate ongoing or significant deficiencies in an employer's pesticide worker protection program.

- B.** Pathology Associates Medical Laboratories (PAML) is currently the only laboratory approved to provide cholinesterase testing services under WAC 296-307-14815.

V. Referral Policy

A. Compliance Services.

DOSH Technical Services will immediately, and no later than one day, refer action level cholinesterase depressions to the appropriate regional compliance office under the following circumstances:

- The growing operation has had an employee experience and action level cholinesterase depression within the previous 3 years.
- An employee experiences an action level cholinesterase depression to the work removal level.
- The growing operation fails to allow a consultation visit within a reasonable time frame, generally within 5 business days from initial contact.
- One or more employees continue to experience cholinesterase depression to the action level after the consultation is closed.
- Serious violations* are not abated in a timely manner.
- Trends or circumstances indicate serious pesticide safety program deficiencies, e.g., action level cholinesterase depression clusters of 3 or more employees.

An onsite visit will be conducted within 72 hours of receiving the referral. Information regarding pesticide handling and potential exposure routes for each employee with action level cholinesterase depression to the action level, will be documented on the Cholinesterase Monitoring Report Sheet (Appendix A) and included in the case file.

**A serious violation exists when there is a substantial probability that death or serious physical harm could result from one of the following in the workplace:*

- *A condition that exists.*
- *One or more practices, means, methods, operations, or processes that have been adopted or are in use.*

B. Consultation Services.

DOSH Technical Services will immediately, and no later than one day, refer action level cholinesterase depressions to the appropriate regional consultation office when this is the first action level cholinesterase depression for this growing operation and none of the other circumstances in subsection A., above, are present.

The regional office will initiate contact with the employer within one business day to schedule a consultation visit. If a consultation visit cannot be scheduled within a reasonable time frame (usually 5 business days), a referral to compliance will be made.

Information regarding pesticide handling and potential exposure routes for each employee with cholinesterase depression to the action level will be documented on the Cholinesterase Monitoring Report Sheet (Appendix A) and included in the case file.

C. Other Offices.

Referrals will be made as follows:

- To L&I Employment Standards Office for issues such as docking pay for PPE and for underage workers potentially performing prohibited duties.
- To the Department of Agriculture Compliance Manager and Department of Health (DOH) Pesticide Program Manager, in accordance with the current Memorandum of Understanding regarding the Agricultural Pesticide Worker Protection Standard.

VI. Enforcement Policy**A. Action Level Cholinesterase Depression.**

The cholinesterase rule is designed to monitor the efficacy of an employer's pesticide worker protection program. A cholinesterase depression >20% requires the employer to evaluate their worker protection program and employee pesticide handling practices. The employer must document this evaluation and all corrections made to reduce potential pesticide exposure. The existence of cholinesterase depression by itself is not a rule violation; however it is an indicator that evaluation of circumstances associated with the depression is necessary. Following a cholinesterase depression to the action level, an employer's failure to evaluate the worker protection program and correct potential sources of pesticide exposure is a violation of WAC 296-307-14825.

The employer may use the Helpful Tool contained in WAC 296-307-148, "Worker Protection Standard Checklist of Requirements" to conduct the required evaluations and document any corrective action taken.

Other workplace hazard violations should be cited under the most specific rule in Chapter 296-307 WAC, or by using the Agriculture Safe Place Standard, WAC 296-307-045.

B. Recordkeeping.

DOSH staff must review the employers' records required under Chapter 296-307 WAC, Part J and J-1 to aid in determining if covered pesticides are being used and if employees have met the specified medical monitoring exposure threshold. Employers must provide declination statements signed by all employees covered by the medical monitoring provisions of the rule, but who are **not** participating in the testing program.

Determine the employer's method for ensuring timely receipt of health care provider recommendations (see Appendix B Health Care Provider Recommendations Sample Form) and providing employees with copies of recommendations within 5 days of receipt as required under section 296-307-14815. Employer documentation of the provision of health care provider recommendations and employee interviews may be used to determine compliance.

VII. Technical Services Protocols

DOSH Technical Services will do the following:

- Review all laboratory reports.
- Alert the health care provider of action level cholinesterase depressions and provide advisory services.
- Routinely analyze test data for trends and anomalies.
- Provide referrals as outlined in this directive.
- Provide technical support to the regions on request.



Approved:

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For further information about this or other DOSH Directives, you may contact the Division of Occupational Safety & Health at P.O. Box 44610, Olympia, WA 98504-4610 – or by telephone at (360) 902-5436. You may also review policy information on the DOSH website (<http://www.lni.wa.gov/Safety>).

[Appendix A is attached to this Directive]

APPENDIX A

CHOLINESTERASE MONITORING REPORT SHEET

Chapter 296-307 WAC, Parts I through J-1

Company:			
Address:			
# Acres:	Crops:		
Investigation type:		Investigator name:	
Opening Date	Closing date:	Case number:	

Farm Worker Name: _____ **Birth date:** _____ **ID Number:** _____

1. Was a confidential interview conducted with the pesticide handler? Yes _____ No _____

If not, explain:

2. Was the interview conducted in the language of the employee? Yes _____ No _____

a. Language _____

b. Translator/CSHO _____

3. Does the handler have an applicator's license? Yes _____ No _____ (if yes, go to question # 5)

4. Has the handler attended all day WSDA "hands on" training? Yes _____ No _____ (if not, go to question #5)

a. WSDA handler card # _____

b. Trainer _____

c. Date and location _____

5. Has the handler been trained by someone other than WSDA? Yes _____ No _____

If yes:

a. By whom _____

b. Type of training (re-certification, pre-license, etc) _____

c. Date & Location _____

Appendix A – Cholinesterase Monitoring Report Sheet (continued)

6. Did Handler receive Cholinesterase training prior to Base Line testing? Yes _____ No _____

If yes:

a. Who provided the Training? _____

b. Did LHCP explained ChE in the language handler understood? _____

7. Class I and II organophosphate and N-methyl-carbamate pesticides handled:

30 days prior to ChE depression _____

8. Did handler receive a copy of the medical provider’s written recommendation and results? Yes _____ No _____

9. Handling activities:

a. Mixer/Loader

b. Mixer/Loader/Applicator

c. Applicator

d. Flagger

e. Other _____

10. If Handler mixed and loaded, was a closed system used? Yes _____ No _____

If yes, what type: _____

11. Application method and equipment (make, type) used:

12. List PPE worn by the handler: (As described by WPS)

a. Chemical Resistant Suit

b. Chemical Resistant Apron

c. Chemical resistant gloves

d. Chemical resistant boots

e. Eye Protection

f. Respirator. Yes _____ No _____ (If not, go to question # 16)

Appendix A – Cholinesterase Monitoring Report Sheet (continued)

13. Type and Style of Respirator used:

- a. TC21C
- b. TC23C ½ Face _____ Full Face _____
- c. TC14G
- d. TC19

14. If tight seal type respirator used, were the following steps completed:

a. Respiratory Protection Program in place? Yes _____ No _____
 Type: Standard _____ Voluntary use: _____

b. Medical Evaluation Yes _____ No _____

c. Fit Test Yes _____ No _____

(1) By Who _____

(2) When _____

(3) Method _____

d. Training? Yes _____ No _____

e. Seal Check? Yes _____ No _____

15. Were required cartridges used? Yes _____ No _____

If yes, Pre-Filter used (circle type):

- a. N
- b. R
- c. P
- d. HE

16. Show and explain routine decontamination procedures for:

Decon Activity	No Procedures	Some Procedures	WSDA Procedures
Application equipment			
PPE			
Respirator			
Personal Hygiene			

Appendix A – Cholinesterase Monitoring Report Sheet (continued)

17. Describe the way you may have been exposed to pesticides and when:

18. What measures could have been taken to prevent the exposure?

19. Did follow-up testing indicate that cholinesterase levels had returned to within 20% of baseline?

Yes _____ No _____

20. Date on which the LHCP authorized handler to return to work: _____ N/A _____

Additional comments:

Signature: _____

Date: _____