

Dear Senators LODGE, Broadsword, Bock*, and
Representatives Senators PEARCE, Bair and Werk, and
RAYBOULD, Harwood, Smith:

The Legislative Services Office, Research and Legislation, has received the enclosed rules of the
Department of Environmental Quality:

IDAPA 58.01.05 - Rules and Standards for Hazardous Waste (Docket No. 58-0105-1101)*;

IDAPA 58.01.10 - Rules Regulating Disposal of Radioactive Materials Not Regulated Under Atomic
Energy Act of 1954, As Amended (Docket No. 58-0110-1101);

IDAPA 58.01.24 - Standards and Procedures for Application of Risk Based Corrective Action at
Petroleum Release Sites (Docket No. 58-0124-1101).

Pursuant to Section 67-454, Idaho Code, a meeting on the enclosed rules may be called by the
cochairmen or by two (2) or more members of the subcommittee giving oral or written notice to Research
and Legislation no later than fourteen (14) days after receipt of the rules analysis from Legislative
Services. The final date to call a meeting on the enclosed rules is no later than 08/12/2011. If a meeting is
called, the subcommittee must hold the meeting within forty-two (42) days of receipt of the rules analysis
from Legislative Services. The final date to hold a meeting on the enclosed rules is 09/12/2011.

The germane joint subcommittee may request a statement of economic impact with respect to a
proposed rule by notifying Research and Legislation. There is no time limit on requesting this statement,
and it may be requested whether or not a meeting on the proposed rule is called or after a meeting has
been held.

To notify Research and Legislation, call 334-4845, or send a written request to the address or FAX
number indicated on the memorandum enclosed.



Jeff Youtz
Director

Legislative Services Office Idaho State Legislature

Serving Idaho's Citizen Legislature

MEMORANDUM

TO: Rules Review Subcommittee of the *Senate Health & Welfare Committee, Senate Resources & Environment Committee and the House Environment, Energy & Technology Committee

FROM: Principal Legislative Research Analyst - Katharine Gerrity

DATE: July 26, 2011

SUBJECT: Department of Environmental Quality

IDAPA 58.01.05 - Rules and Standards for Hazardous Waste (Docket No. 58-0105-1101)*

IDAPA 58.01.10 - Rules Regulating Disposal of Radioactive Materials Not Regulated Under Atomic Energy Act of 1954, As Amended (Docket No. 58-0110-1101)

IDAPA 58.01.24 - Standards & Procedures for Application of Risk Based Corrective Action at Petroleum Release Sites (Docket No. 58-0124-1101)

1. IDAPA 58.01.05 - Rules and Standards for Hazardous Waste

The Department of Environmental Quality submits notice of proposed rule at IDAPA 58.01.05 - Rules And Standards For Hazardous Waste. According to the Department, this rule is updated annually to maintain consistency with the EPA's federal regulations implementing RCRA as directed by the Idaho Hazardous Waste Management Act. The Department notes that the proposed rule updates the federal regulations incorporated by reference to include those revised as of July 1, 2011. The Department states that the rule also includes corrections to section 005 regarding the reference to the Permits and Enforcement division of DEQ which has been changed to Waste Management and Remediation Division, and to sections 006 and 011 which have been revised as a result of technical corrections made to the federal regulations.

The Department confirms that the proposed rule does not regulate an activity not regulated by the federal government, nor is it broader in scope or more stringent than federal regulations. Negotiated rulemaking was not conducted. The proposed rule appears to be authorized by chapters 44 and 58, Title 39, Idaho Code, and 40 CFR 271.21(e).

2. IDAPA 58.01.10 - Rules Regulating Disposal of Radioactive Materials Not Regulated Under Atomic Energy Act of 1954, As Amended

The Department of Environmental Quality submits notice of proposed rule at IDAPA 58.01.10 - Rules Regulating Disposal of Radioactive Materials Not Regulated Under Atomic Energy Act of 1954, As Amended. According to the Department, the purpose of the rulemaking is to implement House Bill 93 (2011),

Mike Nugent Manager
Research & Legislation

Cathy Holland-Smith, Manager
Budget & Policy Analysis

Don H. Berg, Manager
Legislative Audits

Glenn Harris, Manager
Information Technology

which amended Section 39-4403, Idaho Code. House Bill 93 revised the definition of "restricted hazardous waste." The Department states that additional technical corrections and revisions to definitions have also been made in Section 010 as necessary for consistency with House Bill 93 and federal regulations incorporated by reference have been updated to include those revised as of January 1, 2011. The Department states that House Bill 93 clarified that certain materials now included in the new definition could continue to be disposed of at a commercial hazardous waste disposal facility located in Idaho, consistent with the Federal Energy Policy Act of 2005.

The Department states that the rule does regulate an activity not regulated by the federal government but it is consistent with the legislative directive in House Bill 93. Negotiated rulemaking was not conducted. The proposed rule appears to be authorized by Section 39-4405, Idaho Code.

3. IDAPA 58.01.24 - Standards & Procedures for Application of Risk Based Corrective Action at Petroleum Release Sites

The Department of Environmental Quality submits notice of proposed rule at IDAPA 58.01.24 - Standards & Procedures for Application of Risk Based Corrective Action at Petroleum Release Sites. According to the Department, the rulemaking has been initiated to update portions of the rule that are pertinent to evaluation of petroleum release sites in order to promote consistent corrective action decision-making at sites. The Department states that the rule was first adopted in 2008 and approved by the Legislature in 2009. The Department notes that the rule requires DEQ to develop a guidance document to aid in implementation of the rule and during work group meetings for guidance development, the group identified that the current state of the science regarding the methodologies describing how the toxicity data is used to calculate risk, particularly for inhalation exposures, had changed. In addition, the Department notes that the work group concluded that the procedures and screening levels for risk evaluation of the vapor intrusion pathway, as delineated in the existing rule, did not meet current industry practice by omitting the use of soil vapor measurements. The Department states that the proposed rule includes the following specific revisions: Corrects chemical toxicity values in Table 3 to conform to currently accepted standards; updates the screening level values for soil and ground water in Table 2 using updated toxicity values and current risk calculation methodologies; revises the screening level Table 2 by adding screening values for soil vapor measurements; and revises sections 200, 300 and 400 to incorporate the use of soil vapor into the risk evaluation process.

Negotiated rulemaking was conducted. The Department adds that it is also seeking public comment on the guidance document drafted to aid in implementation of the rule.

The Department states that the rule does not propose to regulate an activity not regulated by the federal government but that it does delineate a process that is not specifically delineated or required by the federal government. Consequently, the Department has included in the Notice additional information as required by Section 39-107D, Idaho Code relating to: The identification of each population or receptor addressed by an estimate of public health effects or environmental effects; Expected risk or central estimate of risk for the specific population or receptor and identification of each appropriate upper bound or lower bound estimate of risk; Identification of each significant uncertainty identified in the process of the assessment of public health effects or environmental effects and any studies that would assist in resolving the uncertainty; and Identification of studies known to the Department that support, are directly relevant to, or fail to support any estimate of public health effects or environmental effects and the methodology used to reconcile inconsistencies in the data. The Department states that this information was also previously addressed in the Notice when the rule was first proposed in 2008.

The proposed rule appears to be authorized by Chapters 1, 36, 44, 72 and 74, Title 39, Idaho Code.

cc: Department of Environmental Quality
Paula J. Wilson, John Brueck and Bruce Wicherski

IDAPA 58 - DEPARTMENT OF ENVIRONMENTAL QUALITY

58.01.05 - RULES AND STANDARDS FOR HAZARDOUS WASTE

DOCKET NO. 58-0105-1101

NOTICE OF RULEMAKING - PROPOSED RULE

AUTHORITY: In compliance with Section 67-5221(1), Idaho Code, notice is hereby given that this agency has initiated proposed rulemaking. The action is authorized by Chapters 44 and 58, Title 39, Idaho Code. In addition, 40 CFR 271.21(e) and Section 39-4404, Idaho Code, require DEQ to adopt amendments to federal law as proposed under this docket.

PUBLIC HEARING SCHEDULE: No hearings have been scheduled. Pursuant to Section 67-5222(2), Idaho Code, a public hearing will be held if requested in writing by twenty-five (25) persons, a political subdivision, or an agency. Written requests for a hearing must be received by the undersigned on or before August 17, 2011. If no such written request is received, a public hearing will not be held.

DESCRIPTIVE SUMMARY: Idaho's Rules and Standards for Hazardous Waste are updated annually to maintain consistency with the U.S. Environmental Protection Agency's federal regulations implementing the Resource Conservation and Recovery Act (RCRA) as directed by the Idaho Hazardous Waste Management Act (HWMA). This proposed rule updates the federal regulations incorporated by reference to include those revised as of July 1, 2011. In addition, this proposed rule includes corrections in Sections 005, 006, and 011. In Section 005, the reference to the Permits and Enforcement division of the Department of Environmental Quality (DEQ) has been changed to Waste Management and Remediation Division. Sections 006 and 011 have been revised as a result of technical corrections made to the federal regulations.

Groups interested in hazardous waste and handlers of hazardous waste including generators, transporters, and treatment, storage, and disposal facilities may be interested in commenting on this proposed rule. The proposed rule text is in legislative format. Language the agency proposes to add is underlined. Language the agency proposes to delete is struck out. It is these additions and deletions to which public comment should be addressed.

After consideration of public comments, DEQ intends to present the final proposal to the Board of Environmental Quality in November 2011 for adoption as a pending rule. The rule is expected to be final and effective upon the conclusion of the 2012 legislative session if adopted by the Board and approved by the Legislature.

INCORPORATION BY REFERENCE: Pursuant to Section 67-5229(2)(a), Idaho Code, the following is a brief synopsis of why the incorporation by reference is necessary:

Idaho has historically adopted both required and optional federal regulations so that Idaho's hazardous waste rules are the same as federal requirements. Optional federal regulations usually allow more flexibility to the regulated community; required federal regulations are necessary to maintain program primacy. Adoption by reference allows the DEQ to keep its rules up to date with federal regulation changes and minimizes the EPA Region 10 effort needed to keep Idaho's authorization current. Adoption by reference also simplifies compliance for the regulated community. Information for obtaining a copy of the federal regulations is included in the rule.

NEGOTIATED RULEMAKING: Due to the nature of this rulemaking, negotiations were not held.

IDAHO CODE SECTION 39-107D STATEMENT: This proposed rule does not regulate an activity not regulated by the federal government, nor is it broader in scope or more stringent than federal regulations.

FISCAL IMPACT STATEMENT: The following is a specific description, if applicable, of any negative fiscal impact on the state general fund greater than ten thousand dollars (\$10,000) during the fiscal year: Not applicable.

ASSISTANCE ON TECHNICAL QUESTIONS, SUBMISSION OF WRITTEN COMMENTS: For assistance on questions concerning the proposed rulemaking, contact John Brueck at john.brueck@deq.idaho.gov or (208)373-0458.

Anyone can submit written comments by mail, fax or e-mail at the address below regarding this proposed rule. The Department will consider all written comments received by the undersigned on or before August 31, 2011.

Dated this 8th day of July, 2011.

Paula J. Wilson
Hearing Coordinator
Department of Environmental Quality
1410 N. Hilton/Boise, Idaho 83706-1255
(208)373-0418/Fax No. (208)373-0481
paula.wilson@deq.idaho.gov

THE FOLLOWING IS THE PROPOSED TEXT FOR DOCKET NO. 58-0105-1101

002. INCORPORATION BY REFERENCE OF FEDERAL REGULATIONS.

Any reference in these rules to requirements, procedures, or specific forms contained in the Code of Federal Regulations (CFR), Title 40, Parts 124, 260 - 268, 270, 273, 278, and 279 shall constitute the full adoption by reference of that part and Subparts as they appear in 40 CFR, revised as of July 1, 2010¹, including any notes and appendices therein, unless expressly provided otherwise in these rules. (4-7-11)()

01. Exceptions. Nothing in 40 CFR Parts 260 - 268, 270, 273, 278, 279 or Part 124 as pertains to permits for Underground Injection Control (U.I.C.) under the Safe Drinking Water Act, the Dredge or Fill Program under Section 404 of the Clean Water Act, the National Pollution Discharge Elimination System (NPDES) under the Clean Water Act or Prevention of Significant Deterioration Program (PSD) under the Clean Air Act is adopted or included by reference herein. (5-8-09)

02. Availability of Referenced Material. The federal regulations adopted by reference throughout these rules are maintained at the following locations: (7-2-97)

- a. U.S. Government Printing Office; and (4-7-11)
- b. State Law Library, 451 W. State Street, P.O. Box 83720, Boise, ID 83720-0051, (208)334-3316; and (7-2-97)
- c. Department of Environmental Quality, 1410 N. Hilton, Boise, ID 83706-1255, (208)373-0502. (7-2-97)

(BREAK IN CONTINUITY OF SECTIONS)

004. HAZARDOUS WASTE MANAGEMENT SYSTEM.

40 CFR Part 260 and all Subparts, except 40 CFR 260.2, are herein incorporated by reference as provided in 40 CFR, revised as of July 1, 2010¹. For purposes of 40 CFR 260.10, in the definition of hazardous waste constituent, "Administrator" shall be defined as the U.S. Environmental Protection Agency Administrator. For purposes of 40 CFR 260.20, "Federal Register" shall be defined as the Idaho Administrative Bulletin. (4-7-11)()

005. IDENTIFICATION AND LISTING OF HAZARDOUS WASTE.

40 CFR Part 261 and all Subparts, except the language "in the Region where the sample is collected" in 40 CFR 261.4(e)(3)(iii), are herein incorporated by reference as provided in 40 CFR, revised as of July 1, 2010¹. For purposes

of 40 CFR 261.10 and 40 CFR 261.11, "Administrator" shall be defined as the U.S. Environmental Protection Agency Administrator. For purposes of 40 CFR 261.41(a), Regional Administrator shall be defined as U.S. Environmental Protection Agency Region 10 Regional Administrator. Copies of advance notification required under this section should also be sent to the Director. For purposes of 40 CFR 261.4(b)(11)(ii), 40 CFR 261.39(a)(5), and 40 CFR 261 Appendix IX, "EPA" shall be defined as the U.S. Environmental Protection Agency. (47-H)()

01. Excluded Wastes. Chemically Stabilized Electric Arc Furnace Dust (CSEAFD) generated by EnviroSAFE Services of Idaho, Inc. (ESII) at ESII's facility in Grand View, Idaho using the Super Detox(R) treatment process as modified by ESII and that is disposed of in a Subtitle D or Subtitle C landfill is excluded from the lists of hazardous waste provided ESII implements a program that meets the following conditions: (3-16-96)

a. Verification Testing Requirements. Sample Collection and analyses, including quality control procedures, conducted pursuant to Subsections 005.01.b. and 005.01.c., must be performed according to SW-846 methodologies and the RCRA Part B permit, including future revisions. (3-16-96)

b. Initial Verification Testing. (3-16-96)

i. For purposes of Subsections 005.01.b., "new source" shall mean any generator of Electric Arc Furnace Dust (EAFD), EPA and Idaho Department of Environmental Quality Hazardous Waste No. KO61, whose waste has not previously been processed by ESII using the Super Detox(R) treatment process resulting in processed EAFD which has been subjected to initial verification testing and has demonstrated compliance with the delisting levels specified in Subsection 005.01.d. (3-16-96)

ii. Prior to the initial treatment of any new source of EAFD, ESII must notify the Department in writing. The written notification shall include: (3-16-96)

(1) The waste profile information; and (3-16-96)

(2) The name and address of the generator. (3-16-96)

iii. The first four (4) consecutive batches treated must be sampled in accordance with Subsection 005.01.a. Each of the four (4) samples shall be analyzed to determine if the CSEAFD generated meets the delisting levels specified in Subsection 005.01.d. (3-16-96)

iv. If the initial verification testing demonstrates that the CSEAFD samples meet the delisting levels specified in Subsection 005.01.d., ESII shall submit the operational and analytical test data, including quality control information, to the Department, in accordance with Subsection 005.01.f. Subsequent to such data submittal, the CSEAFD generated from EAFD originating from the new source shall be considered delisted. (3-16-96)

v. CSEAFD generated by ESII from EAFD originating from a new source shall be managed as hazardous waste in accordance with Subtitle C of RCRA until: (3-16-96)

(1) Initial verification testing demonstrates that the CSEAFD meets the delisting levels specified in Subsection 005.01.d.; and (3-16-96)

(2) The operational and analytical test data is submitted to the Department pursuant to Subsection 005.01.b.iv. (3-16-96)

vi. For purposes of Subsections 005.01.b. and 005.01.c., "batch" shall mean the CSEAFD which results from a single treatment episode in a full scale mixing vessel. (3-16-96)

c. Subsequent Verification Testing. (3-16-96)

i. Subsequent to initial verification testing, ESII shall collect a representative sample, in accordance with Subsection 005.01.a., from each batch of CSEAFD generated by ESII. ESII may, at its discretion, conduct subsequent verification testing on composite samples. In no event shall a composite sample consist of representative samples from more than twenty (20) batches of CSEAFD. (3-16-96)

ii. The samples shall be analyzed prior to disposal of each batch of CSEAFD to determine if the CSEAFD meets the delisting levels specified in Subsection 005.01.d. (3-16-96)

iii. Each batch of CSEAFD generated by ESII shall be subjected to subsequent verification testing no later than thirty (30) days after it is generated by ESII. (3-16-96)

iv. If the levels of constituents measured in a sample, or composite sample, of CSEAFD do not exceed the levels set forth in Subsection 005.01.d., then any batch of CSEAFD which contributed to the sample that does not exceed the levels set forth in Subsection 005.01.d. is non-hazardous and may be managed and/or disposed of in a Subtitle D or Subtitle C landfill. (3-16-96)

v. If the constituent levels in a sample, or composite sample, exceed any of the delisting levels set forth in Subsection 005.01.d., then ESII must submit written notification of the results of the analysis to the Department within fifteen (15) days from receiving the final analytical results, and any CSEAFD which contributed to the sample must be: (3-16-96)

(1) Retested, and retreated if necessary, until it meets the levels set forth in Subsection 005.01.d.; or (3-16-96)

(2) Managed and disposed of in accordance with Subtitle C of RCRA. (3-16-96)

vi. Each batch of CSEAFD shall be managed as hazardous waste in accordance with Subtitle C of RCRA until subsequent verification testing demonstrates that the CSEAFD meets the delisting levels specified in Subsection 005.01.d. (3-16-96)

d. Delisting Levels. (3-16-96)

i. All leachable concentrations for these metals must not exceed the following levels (mg/l):

antimony	0.06	mercury	0.009
arsenic	0.50	nickel	1
barium	7.60	selenium	0.16
beryllium	0.010	silver	0.30
cadmium	0.050	thallium	0.020
chromium	0.33	vanadium	2
lead	0.15	zinc	70

(3-16-96)

ii. Metal concentrations must be measured in the waste leachate by the method specified in 40 CFR Part 261.24. (3-16-96)

e. Modification of Treatment Process. (3-16-96)

i. If ESII makes a decision to modify the Super Detox(R) treatment process from the description of the process as set forth in ESII's Petition for Delisting Treated K061 Dust by the Super Detox(R) Process submitted to the Department on July 14, 1995, ESII shall notify the Department in writing prior to implementing the modification. (3-16-96)

ii. After ESII's receipt of written approval from the Department, and subject to any conditions included with the approval, ESII may implement the proposed modification. (3-16-96)

iii. If ESII modifies its treatment process without first receiving written approval from the Department, this exclusion of waste will be void from the time the process was modified. (3-16-96)

iv. ESII's Petition for Delisting Treated K061 Dust by the Super Detox(R) Process submitted to the Department on July 14, 1995 is available at the Department of Environmental Quality, [Permits and Enforcement Waste Management and Remediation Division](#), 1410 N. Hilton, Boise, Idaho 83706. (3-16-96)()

f. Records and Data Retention and Submittal. (3-16-96)

i. Records of disposal site, operating conditions and analytical data from verification testing must be compiled, summarized, and maintained at ESII's Grand View facility for a minimum of five (5) years from the date the records or data are generated. (3-16-96)

ii. The records and data maintained by ESII must be furnished upon request to the Department or EPA. (3-16-96)

iii. Failure to submit requested records or data within ten (10) business days of receipt of a written request or failure to maintain the required records and data on site for the specified time, will be considered by the Department, at its discretion, sufficient basis to revoke the exclusion to the extent directed by the Department. (3-16-96)

iv. All records or data submitted to the Department must be accompanied by a signed copy of the following certification statement to attest to the truth and accuracy of the records or data submitted: "Under civil and/or criminal penalty of law for the making or submission of false or fraudulent statements or representations, I certify that the information contained in or accompanying this document is true, accurate, and complete. As to any identified sections of this document for which I cannot personally verify the truth and accuracy, I certify as the ESII official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate, and complete. In the event that any of this information is determined by the Department in its sole discretion to be false, inaccurate, or incomplete, and upon conveyance of this fact to ESII, I recognize and agree that this exclusion of waste will be void as if it never had effect or to the extent directed by the Department and that ESII will be liable for any actions taken in contravention of ESII's RCRA and CERCLA obligations premised upon ESII's reliance on the void exclusion." (3-16-96)

g. Facility Merger and Name Change. On May 4, 2001, the Department was notified of a stock transfer that resulted in ESII's facility merging with American Ecology. This created a name change from EnviroSAFE Services of Idaho, Inc. (ESII) to US Ecology Idaho, Inc. effective May 1, 2001. All references to EnviroSAFE Services of Idaho, Inc. or ESII now refer to US Ecology Idaho, Inc. (3-15-02)

006. STANDARDS APPLICABLE TO GENERATORS OF HAZARDOUS WASTE.

01. Incorporation by Reference. 40 CFR Part 262 and all Subparts, except for the language "for the Region in which the generator is located" in 40 CFR 262.42(a)(2) and 40 CFR 262.42(b), are herein incorporated by reference as provided in 40 CFR, revised as of July 1, 2010¹. For purposes of 40 CFR 262.55, 262.56, and 262.57(b), "Administrator" shall be defined as the U.S. Environmental Protection Agency ~~Region 10 Regional~~ Administrator. Copies of advance notification, annual reports, and exception reports, required under those sections, shall also be provided to the Director. For purposes of 40 CFR 262.21, 262.51, 262.53, 262.54(e), 262.54(g)(1), ~~262.55, 262.56,~~ 262.60, and 262.85(g), EPA ~~or Environmental Protection Agency~~ shall be defined as the U.S. Environmental Protection Agency. For purposes of 40 CFR Part 262 Subparts E, F, H, and 40 CFR 262.41(a)(4), "United States or U.S." shall be defined as the United States. (4-7-11)()

02. Generator Emergency Notification. In addition to the emergency notification required by 40 CFR 265.56(d)(2), 262.34(d)(5)(iv)(C), (see 40 CFR 262.34(a)(4)), 263.30(c)(1), and 264.56(d)(2), the emergency coordinator must also immediately notify the State Communications Center by telephone, 1-800-632-8000, to file an identical report. (3-15-02)

007. STANDARDS APPLICABLE TO TRANSPORTERS OF HAZARDOUS WASTE.

40 CFR Part 263 and all Subparts are herein incorporated by reference as provided in 40 CFR, revised as of July 1,

2010¹. For purposes of 40 CFR 263.20(g), 263.20(g)(1), 263.20(g)(4), 263.21(a)(4), and 263.22(d), “United States” shall be defined as the United States. (4-7-H)()

008. STANDARDS FOR OWNERS AND OPERATORS OF HAZARDOUS WASTE TREATMENT, STORAGE AND DISPOSAL FACILITIES.

40 CFR Part 264 and all Subparts (excluding 40 CFR 264.1(f), 264.149, 264.150, 264.301(l), 264.1030(d), 264.1050(g), 264.1080(e), 264.1080(f) and 264.1080(g)) are herein incorporated by reference as provided in 40 CFR, revised as of July 1, 2010¹. For purposes of 40 CFR Subsection 264.12(a), “Regional Administrator” shall be defined as the U.S. Environmental Protection Agency Region 10 Regional Administrator. For purposes of 40 CFR 264.71(a)(3) and 264.1082(c)(4)(ii), “EPA” shall be defined as the U.S. Environmental Protection Agency. (4-7-H)()

009. INTERIM STATUS STANDARDS FOR OWNERS AND OPERATORS OF HAZARDOUS WASTE TREATMENT, STORAGE AND DISPOSAL FACILITIES.

40 CFR Part 265, and all Subparts (excluding Subpart R, 40 CFR 265.1(c)(4), 265.149, 265.150, 265.1030(c), 265.1050(f), 265.1080(e), 265.1080(f), and 265.1080(g)) and except the language contained in 40 CFR 265.340(b)(2) as replaced with, “The following requirements continue to apply even when the owner or operator has demonstrated compliance with the MACT requirements of part 63, subpart EEE of this chapter: 40 CFR 265.351 (closure) and the applicable requirements of Subparts A through H, BB and CC of this part,” are herein incorporated by reference as provided in 40 CFR, revised as of July 1, 2010¹. For purposes of 40 CFR Subsection 265.12(a), “Regional Administrator” shall be defined as the U.S. Environmental Protection Agency Region 10 Regional Administrator. For purposes of 40 CFR 265.71(a)(3) and 265.1083(c)(4)(ii), “EPA” shall be defined as the U.S. Environmental Protection Agency. (4-7-H)()

010. STANDARDS FOR THE MANAGEMENT OF SPECIFIC HAZARDOUS WASTES AND SPECIFIC TYPES OF HAZARDOUS WASTE FACILITIES.

40 CFR Part 266 and all Subparts are herein incorporated by reference as provided in 40 CFR, revised as of July 1, 2010¹. (4-7-H)()

011. LAND DISPOSAL RESTRICTIONS.

40 CFR Part 268 and all Subparts are herein incorporated by reference as provided in 40 CFR, revised as of July 1, 2010¹, except for 40 CFR 268.1(e)(3), 268.5, 268.6, 268.13, 268.42(b), and 268.44(a) through (g). The authority for implementing the provisions of these excluded sections remains with the EPA. However, the requirements of Sections 39-4403(17) and 39-4423, Idaho Code, shall be applied in all cases where these requirements are more stringent than the federal standards. If the Administrator of the EPA grants a case-by-case variance pursuant to 40 CFR 268.5, that variance will simultaneously create the same case-by-case variance to the equivalent requirement of these rules. For purposes of 40 CFR 268.2(j) “EPA” shall be defined as the U.S. Environmental Protection Agency. For purposes of 40 CFR 268.40(b), “Administrator” shall be defined as U.S. Environmental Protection Agency Administrator. In 40 CFR 268.7(a)(9)(iii), “D009” is excluded, (from lab packs as noted in 40 CFR Part 268 Appendix IV.) ~~In 40 CFR 268.48(a), the entry for “2,4,6-Tribromophenol” is excluded.~~ (4-7-H)()

012. HAZARDOUS WASTE PERMIT PROGRAM.

40 CFR Part 270 and all Subparts, except 40 CFR 270.12(a) and 40 CFR 270.14(b)(18), are herein incorporated by reference as provided in 40 CFR, revised as of July 1, 2010¹. For purposes of 40 CFR 270.2, 270.5, 270.10(e)(2), 270.10(e)(3), 270.10(f)(2), 270.10(f)(3), 270.10(g), 270.11(a)(3), 270.32(a), 270.32(b)(2), 270.32(c), 270.51, 270.72(a)(5), and 270.72(b)(5), “EPA” and “Administrator” or “Regional Administrator” shall be defined as the U.S. Environmental Protection Agency and the U.S. Environmental Protection Agency Region 10 Regional Administrator respectively. (4-7-H)()

013. PROCEDURES FOR DECISION-MAKING (STATE PROCEDURES FOR RCRA OR HWMA PERMIT APPLICATIONS).

40 CFR Part 124, Subparts A, B and G are herein incorporated by reference as provided in 40 CFR, revised as of July 1, 2010¹, except that 40 CFR 124.19, the fourth sentence of 40 CFR 124.31(a), the third sentence of 40 CFR 124.32(a), and the second sentence of 40 CFR 124.33(a) are expressly omitted from the incorporation by reference of each of those subsections. For purposes of 40 CFR 124.6(e), 124.10(b), and 124.10(c)(1)(ii) “EPA” and “Administrator” or “Regional Administrator” shall be defined as the U.S. Environmental Protection Agency and the U.S. Environmental Protection Agency Region 10 Regional Administrator, respectively. (4-7-H)()

014. (RESERVED)

015. STANDARDS FOR THE MANAGEMENT OF USED OIL.

01. Incorporation by Reference. 40 CFR Part 279 and all Subparts are herein incorporated by reference as provided in 40 CFR, revised as of July 1, 2010¹. For purposes of 40 CFR 279.43(c)(3)(ii) "Director" shall be defined as the Director, U.S.DOT Office of Hazardous Materials Regulation. ~~(4-7-H)~~()

02. Used Oil as a Dust Suppressant. 40 CFR Part 279 contains a prohibition on the use of used oil as a dust suppressant at 279.82(a), however, States may petition EPA to allow the use of used oil as a dust suppressant. Members of the public may petition the State to make this application to EPA. This petition to the State must: (2-11-94)

a. Be submitted to the Idaho Department of Environmental Quality, 1410 North Hilton, Boise, Idaho 83706-1255; and (2-11-94)

b. Demonstrate how the requirements of 40 CFR 279.82(b) will be met. (2-11-94)

016. STANDARDS FOR UNIVERSAL WASTE MANAGEMENT.

40 CFR Part 273 and all Subparts are herein incorporated by reference as provided in 40 CFR, revised as of July 1, 2010¹. For purposes of 40 CFR 273.32(a)(3), "EPA" shall be defined as the U.S. Environmental Protection Agency. ~~(4-7-H)~~()

017. CRITERIA FOR THE MANAGEMENT OF GRANULAR MINE TAILINGS (CHAT) IN ASPHALT CONCRETE AND PORTLAND CEMENT CONCRETE IN TRANSPORTATION CONSTRUCTION PROJECTS FUNDED IN WHOLE OR IN PART BY FEDERAL FUNDS.

40 CFR Part 278 and all Subparts are herein incorporated by reference as provided in 40 CFR, revised as of July 1, 2010¹. ~~(4-7-H)~~()

018. STANDARDS FOR OWNERS AND OPERATORS OF HAZARDOUS WASTE FACILITIES OPERATING UNDER A STANDARDIZED PERMIT.

40 CFR Part 267 and all Subparts are herein incorporated by reference as provided in 40 CFR, revised as of July 1, 2010¹. ~~(4-7-H)~~()

IDAPA 58 - DEPARTMENT OF ENVIRONMENTAL QUALITY

58.01.10 - RULES REGULATING THE DISPOSAL OF RADIOACTIVE MATERIALS NOT REGULATED UNDER THE ATOMIC ENERGY ACT OF 1954, AS AMENDED

DOCKET NO. 58-0110-1101

NOTICE OF RULEMAKING - PROPOSED RULEMAKING

AUTHORITY: In compliance with Section 67-5221(1), Idaho Code, notice is hereby given that this agency has initiated proposed rulemaking. The action is authorized by Section 39-4405, Idaho Code.

PUBLIC HEARING SCHEDULE: No hearings have been scheduled. Pursuant to Section 67-5222(2), Idaho Code, a public hearing will be held if requested in writing by twenty-five (25) persons, a political subdivision, or an agency.

Written requests for a hearing must be received by the undersigned on or before August 17, 2011. If no such written request is received, a public hearing will not be held.

DESCRIPTIVE SUMMARY: The purpose of this rulemaking is to implement House Bill 93 (2011), wherein the Idaho Legislature revised the definition of "restricted hazardous waste" in Section 39-4403, Idaho Code. This proposed rule makes technical corrections and revises certain definitions in Section 010 as necessary for consistency with House Bill 93. In addition, this proposed rule updates the federal regulations incorporated by reference to include those revised as of January 1, 2011.

The Idaho Legislature enacted House Bill 93 to address the new definition of "byproduct material" enacted as part of the Federal Energy Policy Act of 2005 and to clarify that certain materials now included in this new definition could continue to be disposed of at a commercial hazardous waste disposal facility located in Idaho. This change in definition at the federal level would prohibit disposal of this material at a commercial hazardous waste disposal facility under the existing definition of "restricted hazardous waste." The amendment specifically clarifies that a facility could continue taking this waste, consistent with the Federal Energy Policy Act of 2005, which states that commercial hazardous waste facilities are authorized to continue accepting such waste.

The following groups may be interested in commenting on this proposed rule: Private industry; environmental groups; hazardous and nonhazardous waste disposal facilities; members of the public; and generators of radioactive materials specifically allowed for disposal by the U.S. Nuclear Regulatory Commission regulations contained in 10 CFR 20.2008(b). The proposed rule text is in legislative format. Language the agency proposes to add is underlined. Language the agency proposes to delete is struck out. It is these additions and deletions to which public comment should be addressed.

After consideration of public comments, DEQ intends to present the final proposal to the Board of Environmental Quality in November 2011 for adoption as a pending rule. The rule is expected to be final and effective upon the adjournment of the 2012 legislative session if adopted by the Board and approved by the Legislature.

INCORPORATION BY REFERENCE: Pursuant to Section 67-5229(2)(a), Idaho Code, the following is a brief synopsis of why the incorporation by reference is necessary:

This proposed rule updates the federal regulations incorporated by reference to include those revised as of January 1, 2011. Incorporation by reference is necessary because publication of the federal regulations in the rule would be unduly cumbersome and expensive. Information for obtaining a copy of the federal regulations is included in the rule.

NEGOTIATED RULEMAKING: Due to the nature of this rulemaking, negotiations were not held.

IDAHO CODE SECTION 39-107D STATEMENT: This proposed rule does regulate an activity not regulated by the federal government but is consistent with the legislative directive in House Bill 93 (codified at Section 39-4403, Idaho Code).

FISCAL IMPACT STATEMENT: The following is a specific description, if applicable, of any negative fiscal impact on the state general fund greater than ten thousand dollars (\$10,000) during the fiscal year when the pending rule will become effective: Not applicable.

ASSISTANCE ON TECHNICAL QUESTIONS AND SUBMISSION OF WRITTEN COMMENTS: For assistance on technical questions concerning this rulemaking, contact John Brueck at john.brueck@deq.idaho.gov or (208)373-0458.

Anyone may submit written comments by mail, fax or e-mail at the address below regarding this proposed rule. DEQ will consider all written comments received by the undersigned on or before August 31, 2011.

DATED this 8th day of July, 2011.

Paula J. Wilson
Hearing Coordinator
Department of Environmental Quality
1410 N. Hilton, Boise, Idaho 83706-1255
(208)373-0418/Fax No. (208)373-0481
paula.wilson@deq.idaho.gov

THE FOLLOWING IS THE PROPOSED TEXT FOR DOCKET NO. 58-0110-1101

004. INCORPORATION BY REFERENCE.

01. General. Unless expressly provided otherwise, any reference in these rules to any document identified in Subsection 004.02 shall constitute the full adoption by reference, including any notes and appendices therein. The term “documents” includes codes, standards or rules which have been adopted by an agency of the state or of the United States or by any nationally recognized organization or association. (3-15-02)

02. Documents Incorporated by Reference. The following documents are incorporated by reference into these rules: (3-15-02)

- a. 10 CFR 30.14 through 30.16~~5~~, revised as of ~~July~~ January 1, 200~~1~~1. (~~3-15-02~~)()
- b. 10 CFR 30.18 through 30.21, revised as of ~~July~~ January 1, 200~~1~~1. (~~3-15-02~~)()
- c. 10 CFR 32.11, revised as of ~~July~~ January 1, 200~~1~~1. (~~3-15-02~~)()
- d. 10 CFR 32.18, revised as of ~~July~~ January 1, 200~~1~~1. (~~3-15-02~~)()
- e. 10 CFR 40.13, revised as of ~~July~~ January 1, 200~~1~~1. (~~3-15-02~~)()

03. Availability of Referenced Material. Copies of the documents incorporated by reference into these rules are available at the following locations: (3-15-02)

- a. Department of Environmental Quality, 1410 N. Hilton, Boise ID 83706-1255. (3-15-02)
- b. Idaho State Law Library, 451 W. State Street, P.O. Box 83720, Boise ID 83720-0051. (3-15-02)
- c. U.S. Government Printing Office, <http://www.gpoaccess.gov/index.html>. (4-2-08)

(BREAK IN CONTINUITY OF SECTIONS)

010. DEFINITIONS.

- 01. Accelerator-Produced Radioactive Material.** Any material made radioactive by ~~radiation from~~ *exposing it to the* a particle accelerator. (3-15-02)()
- 02. Board.** The Idaho Board of Environmental Quality. (3-15-02)
- 03. Byproduct Material.** Byproduct Material means: (3-15-02)
- a.** Any radioactive material (except special nuclear material) yielded in, or made radioactive by, exposure to the radiation incident to the process of producing or utilizing special nuclear material; and (3-15-02)
- b.** The tailings or waste produced by the extraction or concentration of uranium or thorium from ore processed primarily for its source material content. (3-15-02)
- c.** Any discrete source of radium-226 that is produced, extracted, or converted after extraction, before, on, or after August 8, 2005, for use for a commercial, medical, or research activity; or any material that: ()
- i.** Has been made radioactive by use of a particle accelerator; and ()
- ii.** Is produced, extracted, or converted after extraction, before, on, or after August 8, 2005, for use for a commercial, medical, or research activity; and ()
- d.** Any discrete source of naturally occurring radioactive material, other than source material, that: ()
- i.** The U.S. Nuclear Regulatory Commission, in consultation with the Administrator of the Environmental Protection Agency, the Secretary of Energy, the Secretary of Homeland Security, and the head of any other appropriate federal agency, determines would pose a threat similar to the threat posed by a discrete source of radium- 226 to the public health and safety or the common defense and security; and ()
- ii.** Before, on, or after August 8, 2005, is extracted for use in a commercial, medical, or research activity. ()
- 04. Department.** The Idaho Department of Environmental Quality. (3-15-02)
- 05. Exempt Quantities and Concentrations of Byproduct Materials.** Radioactive materials defined as exempt byproduct materials by the U.S. Nuclear Regulatory Commission (10 CFR 30.14 through 30.16~~5~~, 10 CFR 30.18 through 30.21, 10 CFR 32.11 and 10 CFR 32.18) *in which the quantity and concentration of radionuclides are considered exempt from regulation.* (3-15-02)()
- 06. Naturally Occurring Radioactive Material (NORM).** Any material containing natural radionuclides at natural background concentrations, where human intervention has not concentrated the naturally occurring radioactive material or altered its potential for causing human exposure. NORM does not include source, byproduct or special nuclear material licensed by the U.S. Nuclear Regulatory Commission under the Atomic Energy Act of 1954. (3-15-02)
- 07. Operator.** Any person(s) currently responsible, or responsible at the time of disposal, for the overall operation of a hazardous waste treatment, storage or disposal facility or part of a hazardous waste treatment, storage or disposal site. (3-15-02)
- 08. Owner.** Any person(s) who currently owns, or owned at the time of disposal, a hazardous waste

treatment, storage or disposal facility or part of a hazardous waste treatment, storage or disposal site. (3-15-02)

09. Person. Any individual, association, partnership, firm, joint stock company, trust, political subdivision, public or private corporation, state or federal government department, agency, or instrumentality, municipality, industry, or any other legal entity which is recognized by law as the subject of rights and duties. (3-15-02)

10. Radioactive Material. Radioactive Material includes: (3-15-02)

a. Technologically Enhanced Naturally Occurring Radioactive Material; (3-15-02)

b. ~~Accelerator Produced Radioactive Material~~ Byproduct material authorized for disposal pursuant to 10 CFR 20.2008(b); (~~3-15-02~~)()

c. Exempt Quantities and Concentrations of Byproduct Materials; (4-2-08)

d. Unimportant Quantities of Source Material; and (4-2-08)

e. Any other byproduct, source material, or special nuclear material or devices or equipment utilizing such material, which has been declared exempt from regulation under the Atomic Energy Act of 1954, as amended, for the purposes of disposal pursuant to 10 CFR 30.11, 10 CFR 40.14, 10 CFR 70.17. (4-2-08)

11. Reasonably Maximally Exposed Individual. That individual or group of individuals who by reason of location has been determined, through the use of environmental transport modeling and dose calculation, to receive the highest total effective dose equivalent from radiation emitted from the site and/or radioactive material transported off-site. (3-15-02)

12. Source Material. Source material means: (3-15-02)

a. Uranium or thorium, or any combination thereof, in any physical or chemical form; or (3-15-02)

b. Ores which contain by weight one-twentieth of one percent (0.05%) or more of: (3-15-02)

i. Uranium; (3-15-02)

ii. Thorium; or (3-15-02)

iii. Any combination thereof. (3-15-02)

c. Source material does not include special nuclear material. (3-15-02)

13. Special Nuclear Material. Special Nuclear Material means: (3-15-02)

a. Plutonium, uranium 233, uranium enriched in the isotope 233 or in the isotope 235, and any other material which the U.S. Nuclear Regulatory Commission determines to be special nuclear material. (3-15-02)

b. Any material artificially enriched by any of the material listed in Subsection 010.12.a. (3-15-02)

14. Technologically Enhanced Naturally Occurring Radioactive Material (TENORM). Any naturally occurring radioactive materials not subject to regulation under the Atomic Energy Act whose radionuclide concentrations or potential for human exposure have been increased above levels encountered in the natural state by human activities. TENORM does not include source, byproduct or special nuclear material licensed by the U.S. Nuclear Regulatory Commission under the Atomic Energy Act of 1954. (3-15-02)

15. Unimportant Quantities of Source Material. Radioactive materials defined as unimportant quantities of source materials by the U.S. Nuclear Regulatory Commission (10 CFR 40.13). (3-15-02)

IDAPA 58 - DEPARTMENT OF ENVIRONMENTAL QUALITY

58.01.24 - STANDARDS AND PROCEDURES FOR APPLICATION OF RISK BASED CORRECTIVE ACTION AT PETROLEUM RELEASE SITES

DOCKET NO. 58-0124-1101

NOTICE OF RULEMAKING - PROPOSED RULEMAKING

AUTHORITY: In compliance with Section 67-5221(1), Idaho Code, notice is hereby given that this agency has initiated proposed rulemaking. This action is authorized by Chapters 1, 36, 44, 72 and 74, Title 39, Idaho Code.

PUBLIC HEARING SCHEDULE: No hearings have been scheduled. Pursuant to Section 67-5222(2), Idaho Code, a public hearing will be held if requested in writing by twenty-five (25) persons, a political subdivision, or an agency. Written requests for a hearing must be received by the undersigned on or before August 17, 2011. If no such written request is received, a public hearing will not be held.

DESCRIPTIVE SUMMARY: DEQ rule chapter "Standards and Procedures for Application of Risk Based Corrective Action at Petroleum Release Sites," IDAPA 58.01.24, was adopted by the Idaho Board of Environmental Quality in 2008 and approved by the Idaho Legislature in 2009. The rule requires that DEQ develop a guidance document to aid in implementation of the rule. During work group meetings for guidance development, the work group identified that the current state of the science regarding the methodologies describing how the toxicity data is used to calculate risk, particularly for inhalation exposures, had changed. The work group also concluded that the procedures and screening levels for risk evaluation of the vapor intrusion pathway, as delineated in the existing rule, did not meet current industry practice by omitting the use of soil vapor measurements. This rulemaking has been initiated to update portions of the rule that are pertinent to evaluation of petroleum release sites in order to promote consistent corrective action decision-making at these sites.

The proposed rule includes the following revisions:

1. Correct chemical toxicity values in Table 3 to conform to currently accepted standards;
2. Update the Screening Level values for soil and ground water in Table 2 using these updated toxicity values and current risk calculation methodologies;
3. Revise the Screening Level Table 2 by adding screening values for soil vapor measurements; and
4. Sections 200, 300, and 400 will be revised to incorporate the use of soil vapor into the risk evaluation process.

Cities, counties, bankers, lenders, realtors, petroleum marketers, consultants, and citizens of the state of Idaho may be interested in commenting on this proposed rule. The proposed rule text is in legislative format. Language the agency proposes to add is underlined. Language the agency proposes to delete is struck out. It is these additions and deletions to which public comment should be addressed.

After consideration of public comments, DEQ intends to present the final proposal to the Board of Environmental Quality at the November 2011 Board meeting for adoption as a pending rule. The rule is expected to be final and effective upon the adjournment of the 2012 legislative session if adopted by the Board and approved by the Legislature.

While not part of this rulemaking, DEQ is also seeking public comment on the guidance document drafted to aid in implementation of this rule. The guidance document is titled "Draft Idaho Risk Evaluation Manual for Petroleum Releases" and may be obtained at www.deq.idaho.gov/risk-evaluation-manual. Submit written comments on the "Draft Idaho Risk Evaluation Manual for Petroleum Releases" by e-mail or fax to Bruce Wicherski at bruce.wicherski@deq.idaho.gov or (208)373-0154 (fax number). DEQ will consider all written comments received on or before August 31, 2011.

INCORPORATION BY REFERENCE: Pursuant to Section 67-5229(2)(a), Idaho Code, the following is a brief synopsis of why the incorporation by reference is necessary: Not applicable.

NEGOTIATED RULEMAKING: The text of the proposed rule has been drafted based on discussions held during negotiations conducted pursuant to Section 67-5220, Idaho Code, and IDAPA 58.01.23.810-815. On June 1, 2011, the Notice of Negotiated Rulemaking was published in the [Idaho Administrative Bulletin, Vol. 11-6, pages 142 through 143](#), and a preliminary draft rule was made available for public review. A meeting was held on June 23, 2011. One

member of the public participated in this negotiated rulemaking process by attending the meeting. A record of the negotiated rule drafts and documents distributed during the negotiated rulemaking process is available at <http://www.deq.idaho.gov/58-0124-1101-proposed>.

IDAHO CODE SECTION 39-107D STATEMENT: Section 39-107D, Idaho Code, provides that DEQ must meet certain requirements when it formulates and recommends rules which are broader in scope or more stringent than federal law or regulations. There is no federal law or regulation that is comparable to the Standards and Procedures for Application of Risk Based Corrective Action at Petroleum Release Sites. Therefore, this proposed rule is not broader in scope or more stringent than federal law or regulations.

Section 39-107D, Idaho Code, also applies to a rule which “proposes to regulate an activity not regulated by the federal government.” This rule does not propose to regulate an activity not regulated by the federal government. However, the rule does delineate a process that is not specifically delineated or required by the federal government. The following is a summary of additional information specified in Sections 39-107D(3) and (4), Idaho Code. DEQ previously addressed Sections 39-107D(3) and (4), Idaho Code, when this rule chapter was first promulgated in 2009 and is reiterating the information in this notice.

Section 39-107D(3)(a), Idaho Code. Identification of each population or receptor addressed by an estimate of public health effects or environmental effects.

This rule delineates a process to evaluate the human health risks resulting from exposure to chemicals associated with petroleum releases. It is not known prior to the release of petroleum at a specific site which potential populations or receptors may be exposed. During the initial conservative screening portion of the process, it is assumed that the target populations at risk are residential receptors and sensitive subpopulations. In subsequent steps in the risk evaluation process described in the rule, site-specific determination of current and likely potential future receptors can be made.

Section 39-107D(3)(b) and (c), Idaho Code. Identification of the expected risk or central estimate of risk for the specific population or receptor and identification of each appropriate upper bound or lower bound estimate of risk.

This rule describes a procedure for risk evaluation at petroleum release sites and requirements, both general and specific, for the site-specific estimation of risk. In the initial step of the risk evaluation process described by this rule, a screening level approach is utilized. The screening levels are compared to site media-specific petroleum chemical concentrations to determine the need for further evaluation or corrective action.

The screening levels were calculated using target cancer and non-cancer health risks in combination with specific parameter values for each of the variables in the standard equations used to calculate acceptable concentrations. For some factors central estimate values were used while for other factors an upper bound estimate was selected. The screening levels can be characterized as representing upper bound estimates of risk for residential receptors for the routes of exposure evaluated.

The more detailed risk evaluation process described in the rule allows the incorporation of site-specific data and assumptions, such as the likely future land use and receptors, into the risk calculation. The requirements for site-specific risk evaluation described in this rule specify 1) the acceptable cumulative risk and hazard that should apply at all sites and 2) that calculated risks should represent a reasonable maximum exposure scenario.

Section 39-107D(3)(d), Idaho Code. Identification of each significant uncertainty identified in the process of the assessment of public health effects or environmental effects and any studies that would assist in resolving the uncertainty.

There are a number of uncertainties in the risk evaluation process described in the rule. These include uncertainty in the estimation of exposure for specific receptors or populations, as well as uncertainty in the magnitude of effects associated with a specific dose of a chemical. The estimation of exposure is based on both environmental transport pathways from a petroleum release to a receptor, as well as on physiological and behavioral characteristics of the receptor.

Examples of physiological characteristics include body weight and breathing rate. Behavioral characteristics include such things as how much time a receptor spends outdoors each day, and how long a receptor lives at one location. Within a population there is variability in physiological and behavioral characteristics; uncertainty results

from lack of knowledge of the characteristics of current or future individuals who may be exposed to chemicals from a petroleum release. In the initial screening step of the risk evaluation process described in the rule, this uncertainty is addressed by utilizing values for these parameters from databases that are universally accepted in standard risk assessment practice. Many of the values selected for the screening step are upper-bound values from distributions in the databases, as the goal in this initial evaluation is to evaluate risk to residential and sensitive populations. In subsequent steps of the risk evaluation process, it is sometimes possible to collect site-specific data that can reduce uncertainty for a specific population. For example, there might be information available that allows a more accurate estimation of exposure frequency or duration, thereby reducing uncertainty for this population.

Uncertainty in environmental transport, such as the leaching of chemicals in soil to ground water, is related to the physical and chemical properties of the chemicals present in a petroleum release, as well as physical characteristics of the setting, such as depth to ground water. Parameter values from the scientific literature and accepted databases are utilized to assess environmental transport for the initial screening step of the process described in the rule. In the subsequent site-specific risk evaluation, collection of site-specific data is a powerful tool to reduce uncertainty, resulting in a better understanding of risks at the site.

Uncertainty in dose-response assessment is addressed by use of the best available toxicological data from databases which are universally recognized and accepted as part of standard risk assessment practice.

Section 39-107D(3)(e), Idaho Code. Identification of studies known to the department that support, are directly relevant to, or fail to support any estimate of public health effects or environmental effects and the methodology used to reconcile inconsistencies in the data.

The referenced studies and analyses will be included in the rulemaking record and can be reviewed during the public comment period for further detailed information regarding health effects.

REFERENCES:

American Society for Testing and Materials. 1995. *Standard Guide for Risk-Based Corrective Action Applied at Petroleum Release Sites*. E1739-95.

DOE, 1995. *Housing Characteristics 1993*. United States Department of Energy. Energy Information Administration. DOE/EIA-0314 (93).

DOE, 2001. *Commercial Building Energy Characteristics Survey*. United States Department of Energy. Energy Information Administration. Summary Table B2. (http://www.eia.doe.gov/emeu/cbecs/detailed_tables_1999.htm)

EPA, 1989. *Risk Assessment Guidance for Superfund, Volume 1: Human Health Evaluation Manual, Part A*. EPA/540/1-89/002. United States Environmental Protection Agency, Office of Emergency and Remedial Response.

EPA, 1991. *Risk Assessment Guidance for Superfund, Volume 1: Human Health Evaluation Manual Supplemental Guidance, Standard Default Exposure Factors, Interim Final*. OSWER Directive: 9285.6-03. United States Environmental Protection Agency, OSWER.

EPA, 1996. *Soil Screening Guidance: Technical Background Document*. Office of Emergency and Remedial Response. Washington, D.C. OSWER No. 9355.4-17A.

EPA, 1997. *Exposure Factors Handbook*. EPA/600/P-95/002Fa. United States Environmental Protection Agency, ORD.

EPA, 2004. *Risk Assessment Guidance for Superfund, Volume 1: Human Health Evaluation Manual, Part E, Supplemental Guidance for Dermal Risk Assessment, Final*. OSWER Directive: 9285.7-02EP. EPA/540/R/99/005. United States Environmental Protection Agency, OSWER. July 2004.

EPA, 2003. *User's Guide for Evaluating Subsurface Vapor Intrusion into Buildings (Revised)*. United States Environmental Protection Agency. OSWER. June 19, 2003.

EPA, 2005. Supplemental Guidance for Assessing Susceptability from Early-Life Exposure to Carcinogens. United States Environmental Protection Agency. Risk Assessment Forum. EPA-630-R-03-003F. March 2005.

EPA, 2008. *Child-Specific Exposure Factors Handbook*. EPA/600/R-06/096F. United States Environmental Protection Agency, NCEA, ORD. September, 2008.

EPA, 2009. Risk Assessment Guidance for Superfund, Volume I: Human Health Evaluation Manual (Part F, Supplemental Guidance for Inhalation Risk Assessment). United States Environmental Protection Agency. OSWER Directive 9285.7-82. EPA-540-R-070-002. January 2009.

EPA, 2011. *Regional Screening Table*. http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/index.htm

Hers, I. 2002. *Technical Memorandum to Debbie Newberry*, USEPA OSW. Input Parameters for OSWER Wide Guidance for Vapor Intrusion Pathway. June 3, 2002.

Johnson, Paul C. 2005. *Identification of Application-Specific Critical Inputs for the 1991 Johnson and Ettinger Vapor Intrusion Algorithm*. Ground Water Monitoring and Remediation. Volume 25. No. 1. Pages 63-78.

Johnson and Ettinger, 1991. Johnson, P.C. and R.A. Ettinger. *Heuristic Model for Predicting the Intrusion Rate of Contaminant Vapors into Buildings*. Environmental Science and Technology. Volume 25, Pages 1445-1452.

MDEQ, 1998. *Part 201 Generic Groundwater and Soil Volatilization to Indoor Air Inhalation Criteria: Technical Support Document*. Michigan Department of Environmental Quality. Environmental Response Division.

Nielsen and Rodgers, 1990. Nielsen, K.K. and V.C. Rodgers. *Radon transport properties of soil classes for estimating indoor radon entry*. In Proceedings of the 29th Hanford Symposium of Health and the Environment. Indoor Radon and Lung Cancer: Reality or Myth? Part 1. F.T. Cross (ed), Battelle Press, Richland, Washington.

FISCAL IMPACT STATEMENT: The following is a specific description, if applicable, of any negative fiscal impact on the state general fund greater than ten thousand dollars (\$10,000) during the fiscal year when the pending rule will become effective: Not applicable.

ASSISTANCE ON TECHNICAL QUESTIONS AND SUBMISSION OF WRITTEN COMMENTS: For assistance on technical questions concerning this rulemaking, contact Bruce Wicherski at bruce.wicherski@deq.idaho.gov or (208)373-0246.

Anyone may submit written comments by mail, fax or e-mail at the address below regarding this proposed rule. DEQ will consider all written comments received by the undersigned on or before August 31, 2011.

DATED this 8h day of July, 2011.

Paula J. Wilson
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THE FOLLOWING IS THE PROPOSED TEXT FOR DOCKET NO. 58-0124-1101

005. AVAILABILITY OF REFERENCED MATERIAL.

Documents and data bases referenced within these rules are available at the following locations: (5-8-09)

01. Idaho Risk Evaluation Manual for Petroleum Releases. Idaho Risk Evaluation Manual for Petroleum Releases and subsequent editions, <http://www.deq.idaho.gov>. ~~(5-8-09)~~()

02. U.S. EPA RAGS. U.S. EPA RAGS, Volume 1, <http://www.epa.gov/oswer/riskassessment/policy.htm#5>. (5-8-09)

03. U.S. EPA Exposure Factors Handbook. U.S. EPA Exposure Factors Handbook, <http://www.epa.gov/ncea/pdfs/efh/front.pdf>. (5-8-09)

~~**04.** U.S. EPA IRIS Database. U.S. EPA IRIS Database. (5-8-09)~~

~~**05**~~**4.** Idaho Source Water Assessment Plan. Idaho Source Water Assessment Plan, <http://www.deq.idaho.gov>. (5-8-09)

~~**05.** EPA Regional Screening Tables. EPA Regional Screening Tables, http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/index.htm. ()~~

~~**06.** *Provisional Guidance for Quantitative Risk Assessment of Polycyclic Aromatic Hydrocarbons. Provisional Guidance for Quantitative Risk Assessment of Polycyclic Aromatic Hydrocarbons. 1993. U.S. Environmental Protection Agency, Office of Research and Development, Office of Health and Environmental Assessment, Washington, DC, EPA/600/R-93/089.* (5-8-09)~~

(BREAK IN CONTINUITY OF SECTIONS)

009. ACRONYMS.

~~**01.** *ATSDR. Agency for Toxic Substances and Disease Registry.* (5-8-09)~~

~~**02**~~**1.** EPA. The United States Environmental Protection Agency. (5-8-09)

~~**03.** *IRIS. Integrated Risk Information System.* (5-8-09)~~

~~**04.** *NCEA. National Center for Environmental Assessment.* (5-8-09)~~

~~**05**~~**2.** PST. Petroleum Storage Tank System. (5-8-09)

~~**06**~~**3.** RAGS. Risk Assessment Guidance for Superfund. (5-8-09)

~~**07**~~**4.** UECA. Uniform Environmental Covenant Act. See definition in Section 010. (5-8-09)

(BREAK IN CONTINUITY OF SECTIONS)

200. RISK EVALUATION PROCESS.

The following risk evaluation process shall be used for petroleum releases in accordance with the Petroleum Release Response and Corrective Action Rules described in IDAPA 58.01.02, "Water Quality Standards," Section 852. (5-8-09)

01. Screening Evaluation. The screening evaluation may be performed at any time during the release

response and corrective action process described in IDAPA 58.01.02, "Water Quality Standards," Section 852. The screening evaluation shall include, at a minimum: (5-8-09)

- a. Collection of media-specific (soil, surface water, ground water) data; and (5-8-09)
- b. Identification of maximum soil ~~and~~, ground water, and soil vapor petroleum chemical concentrations for the chemicals identified in Subsection 800.01 (Table 1) as appropriate for the petroleum product or products released. ~~(5-8-09)~~()
- c. Comparison of the maximum media-specific petroleum contaminant concentrations to the screening levels identified in Subsection 800.02 (Table 2). If the maximum media-specific petroleum contaminant concentrations at a site do not exceed the screening levels, the owner and/or operator may petition for site closure, subject to other Department regulatory obligations. If the maximum media-specific concentrations at a site exceed the screening levels, the owner and/or operator shall proceed to: (5-8-09)
 - i. Adopt the screening levels as cleanup levels and develop a corrective action plan to achieve those levels pursuant to Subsection 200.03; or (5-8-09)
 - ii. Perform a site specific risk evaluation pursuant to Section 300. The Department may require the collection of additional site-specific data prior to the approval of the risk evaluation. (5-8-09)

02. Results of Risk Evaluation. If the results of the approved risk evaluation do not exceed the acceptable target risk level, acceptable target hazard quotient, or acceptable target hazard index specified in Section 300, the owner and/or operator may petition for site closure, subject to other Department regulatory obligations. If the results of the approved risk evaluation indicates exceedance of the acceptable target risk level, acceptable target hazard quotient, or acceptable target hazard index specified in Section 300, the risk evaluation shall: (5-8-09)

- a. Be modified by collection of additional site-specific data, or review of chemical toxicological information, and resubmitted to the Department for review and approval; or (5-8-09)
- b. Provide the basis for the development of risk based concentrations, establishment of remediation standards as described in Section 400, and development of a corrective action plan. (5-8-09)

03. Development and Implementation of Corrective Action Plan. A Corrective Action plan required as a result of the risk evaluation process described in Section 200 shall include, but not be limited to, the following information, as applicable: (5-8-09)

- a. Description of remediation standards, points of exposure, and points of compliance where remediation standards shall be achieved; (5-8-09)
- b. Description of remedial strategy and actions that will be taken to achieve the remediation standards; (5-8-09)
- c. Current and reasonably anticipated future land use and use of on-site and immediately adjacent off-site ground water, and surface water; (5-8-09)
- d. Activity and use limitations, if any, that will be required as part of the remedial strategy; (5-8-09)
- e. Proposed environmental covenants, developed to implement activity and use limitations, in accordance with Section 600; (5-8-09)
- f. Estimated timeline for completion; and (5-8-09)
- g. Monitoring Plan to monitor effectiveness of remedial actions. (5-8-09)
- h. Description of practical quantitation limits as they apply. (5-8-09)

- i. Description of background concentrations as they apply. (5-8-09)

04. Department Review and Approval of Risk Evaluation or Corrective Action Plan. Within thirty (30) days of receipt of the risk evaluation or corrective action plan, the Department shall provide in writing either approval, approval with modifications, or rejection of the risk evaluation or corrective action plan. If the Department rejects the risk evaluation or corrective action plan, it shall notify the owner and/or operator in writing specifying the reasons for the rejection. If the Department needs additional time to review the documents, it will provide written notice to the owner and/or operator that additional time to review is necessary and will include an estimated time for review. Extension for review time shall not exceed one hundred eighty (180) days without a reasonable basis and written notice to the owner and/or operator. (5-8-09)

201. -- 299. (RESERVED)

300. SITE SPECIFIC RISK EVALUATION REQUIREMENTS.

01. General Requirements. The general requirements for human health risk evaluations shall include, at a minimum: (5-8-09)

a. A conceptual site model which describes contaminant sources; release mechanisms; the magnitude, spatial extent, and temporal trends of petroleum contamination in all affected media; transport routes; current and reasonably likely future land use and human receptors; and relevant exposure scenarios. (5-8-09)

b. Toxicity Information derived from Subsection 800.03 (Table 3). (5-8-09)

c. Data quality objectives and sampling approaches based on the conceptual site model that support the risk evaluation and risk management process. (5-8-09)

d. Estimated exposure point concentrations for a reasonable maximum exposure based on a conservative estimate of the mean of concentrations of chemicals that would be contacted by an exposed receptor. (5-8-09)

e. Exposure analysis including identification of contaminants of concern, potentially exposed populations, pathways and routes of exposure, exposure point concentrations and their derivation, and a quantitative estimate of reasonable maximum exposure for both current and reasonably likely future land and water use scenarios. Appropriate reference sources of reasonable maximum exposure factor information may include, but are not limited to: (5-8-09)

i. U.S. EPA RAGS, Volume 1; (5-8-09)

ii. U.S. EPA Exposure Factors Handbook; (5-8-09)

iii. Idaho Risk Evaluation Manual [for Petroleum Releases](#); and ~~(5-8-09)~~()

iv. Other referenced technical publications. (5-8-09)

f. Risk characterization presenting the quantitative human health risks and a qualitative and quantitative assessment of uncertainty for each portion of the risk evaluation. (5-8-09)

g. Risk evaluations may include the use of transport and fate models, subject to Department approval of the model and the data to be used for the parameters specified in the model. (5-8-09)

02. Specific Requirements. Human health risk evaluations shall, at a minimum: (5-8-09)

a. Utilize an acceptable target risk level as defined in Section 010; (5-8-09)

b. Utilize an acceptable target hazard index as defined in Section 010; (5-8-09)

- c. Utilize an acceptable target hazard quotient as defined in Section 010; (5-8-09)
- d. Evaluate the potential for exposure from: (5-8-09)
 - i. Ground water ingestion; (5-8-09)
 - ii. Direct contact with contaminated soils resulting from soil ingestion, dermal contact, and inhalation of particulates and vapors; (5-8-09)
 - iii. Indoor inhalation of volatile chemicals via volatilization of chemicals from soil, ground water, or free phase product; (5-8-09)
 - iv. Ingestion, inhalation, or dermal exposure to ground water and/or surface water which has been impacted by contaminants that have leached from the soils; and (5-8-09)
 - v. Other complete or potentially complete routes of exposure; (5-8-09)
- e. Evaluate the potential for exposure to: (5-8-09)
 - i. Adult and child residential receptors; (5-8-09)
 - ii. Adult construction and utility workers; (5-8-09)
 - iii. Aquatic life; (5-8-09)
 - iv. Recreational receptors; and (5-8-09)
 - v. Other relevant potentially exposed receptors; (5-8-09)
- f. Evaluate the potential for use of impacted ground water for ingestion based on: (5-8-09)
 - i. The current and historical use of the ground water for drinking water or irrigation; (5-8-09)
 - ii. The location and approved use of existing ground water wells in a one half (½) mile radius from the contaminated site at the release point; (5-8-09)
 - iii. The degree of hydraulic connectivity between the impacted ground water and other ground water bearing zones or surface water; and (5-8-09)
 - iv. The location of delineated source water protection areas for public drinking water systems. (5-8-09)

301. -- 399. (RESERVED)

400. ESTABLISHMENT OF REMEDIATION STANDARDS.

If, as a result of the assessment and risk evaluation completed as described in Section 300, it is determined that corrective action is required, remediation standards shall be established. The remediation standards established in these rules shall be no more stringent than applicable or relevant and appropriate federal and state standards and are consistent with Section 121 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (42 U.S.C. Section 9621) and Section 39-107D(2), Idaho Code, taking into consideration site specific conditions. These standards, and any activity use limitations proposed for the site, shall be established as part of a corrective action plan approved in writing by the Department. The standards may consist of the following. (5-8-09)

01. Screening Levels. The petroleum contaminant concentrations in soil ~~and~~, ground water, and soil vapor in Subsection 800.02 (Table 2). (5-8-09)()

02. Risk Based Levels. Site-specific, media-specific petroleum contaminant concentrations

established in accordance with the risk evaluation procedures and requirements described in Section 300. (5-8-09)

03. Generic Health Standards. An established state or federal generic numerical health standard which achieves an appropriate health-based level so that any substantial present or probable future risk to human health or the environment is eliminated or reduced to protective levels based upon present and reasonably anticipated future uses of the site. (5-8-09)

04. Other. Remediation standards may be a combination of standards found in Subsections 400.01 through 400.03. (5-8-09)

(BREAK IN CONTINUITY OF SECTIONS)

800. TABLES.

01. Table 1. Chemicals of Interest for Various Petroleum Products.

CHEMICALS OF INTEREST FOR VARIOUS PETROLEUM PRODUCTS				
Chemical	Gasoline/ JP-4/ AVGas	Diesel/ Fuel Oil No. 2/ Kerosene	Fuel Oil No.4	Jet Fuels (Jet A, JP-5, JP-8)
Benzene	X	X		X
Toluene	X	X		X
Ethyl benzene	X	X		X
Xylenes (mixed)	X	X		X
Ethylene Dibromide (EDB)	X ¹			
1,2 Dichloroethane (EDC)	X ¹			
Methyl Tert-Butyl Ether (MTBE)	X			
Acenaphthene		X	X	X
Anthracene		X	X	X
Benzo(a)pyrene		X	X	X
Benzo(b)fluoranthene		X	X	X
Benzo(k)fluoranthene		X	X	X
Benz(a)anthracene		X	X	X
Chrysene		X	X	X
Fluorene		X	X	X
Fluoranthene		X	X	X
Naphthalene	X	X	X	X
Pyrene		X	X	X
X ¹ Leaded Regular Only				

(5-8-09)

02. Table 2. Residential Use Screening Levels.

RESIDENTIAL USE SCREENING LEVELS						
CHEMICALS	SOIL		GROUNDWATER			SOIL VAPOR ^e
	Screening Level [mg/kg]	Critical Pathway	Critical-Receptor Screening Level [mg/L]	Screening Level [mg/L] Critical Pathway	Critical-Pathway Basis for Ingestion Screening Level ^d	Basis for Ingestion-Target/Inhalation-Critical-Receptor ^d Screening Level [$\mu\text{g}/\text{m}^3$]
Benzene	$1.78\text{E-}02$ 0.025	GWP ^a	GWP 0.005	$5.00\text{E-}03$ Ingestion	Ingestion MCL ^b	MCL ^b 31
Toluene	$4.89\text{E+}00$ 6.6	GWP	GWP 1.0	$1.00\text{E+}00$ Ingestion	Ingestion MCL	MCL 520,000
Ethylbenzene	$7.10\text{E-}02$ 0.25	Subsurface Soil Vapor Intrusion	Child 0.05	$1.07\text{E-}01$ Vapor Intrusion	Indoor Inhalation N/A	Age-Adjusted 97
Total Xylenes	$1.68\text{E+}00$ 27	Subsurface Soil Vapor Intrusion	Child 8.7	$4.46\text{E+}00$ Vapor Intrusion	Indoor Inhalation N/A	Child 10,000
Naphthalene	$7.8\text{E-}02$ 0.12	Subsurface Soil Vapor Intrusion	Age-Adjusted 0.07	$1.02\text{E-}01$ Vapor Intrusion	Indoor Inhalation N/A	Age-Adjusted 7.2
MTBE ^c	$6.70\text{E-}02$ 0.08	GWP	GWP 0.04	$3.10\text{E-}02$ Ingestion	Ingestion Risk-Based	Risk-Based 940
Ethylene dibromide (EDB)	$1.43\text{E-}04$ 0.0001	GWP	GWP 0.00005	$5.00\text{E-}05$ Ingestion	Ingestion MCL	MCL 0.4
1,2-Dichloroethane	$7.71\text{E-}03$ 0.013	Subsurface Soil GWP	Child 0.005	$5.00\text{E-}03$ Ingestion	Ingestion MCL	MCL 9.4
Acenaphthene	$5.23\text{E+}01$ 200	GWP	GWP 2.2	$6.26\text{E-}01$ Ingestion	Ingestion Risk-Based	Risk-Based N/A
Anthracene	$1.04\text{E+}03$ 3200	GWP	GWP 11	$3.13\text{E+}00$ Ingestion	Ingestion Risk-Based	Risk-Based N/A
Benz(a)anthracene	$4.22\text{E-}01$ 0.09	Surficial Soil GWP	Age-Adjusted 0.00003	$7.65\text{E-}05$ Ingestion	Ingestion Risk-Based	Risk-Based N/A
Benzo(a)pyrene	$4.22\text{E-}02$ 0.02	Surficial Soil Direct Contact	Age-Adjusted 0.0002	$2.00\text{E-}04$ Ingestion	Ingestion MCL	MCL N/A
Benzo(b)fluoranthene	$4.22\text{E-}01$ 0.2	Surficial Soil Direct Contact	Age-Adjusted 0.00003	$7.65\text{E-}05$ Ingestion	Ingestion Risk-Based	Risk-Based N/A
Benzo(k)fluoranthene	$4.22\text{E+}00$ 1.9	Surficial Soil Direct Contact	Age-Adjusted 0.0003	$7.65\text{E-}04$ Ingestion	Ingestion Risk-Based	Risk-Based N/A
Chrysene	$3.34\text{E+}01$ 9.5	GWP	GWP 0.003	$7.65\text{E-}03$ Ingestion	Ingestion Risk-Based	Risk-Based N/A

RESIDENTIAL USE SCREENING LEVELS						
CHEMICALS	SOIL		GROUNDWATER			SOIL VAPOR ^e
	Screening Level [mg/kg]	Critical Pathway	Critical-Receptor Screening Level [mg/L]	Screening Level [mg/L] Critical Pathway	Critical-Pathway Basis for Ingestion Screening Level ^d	Basis for Ingestion-Target/Inhalation-Critical-Receptor ^d Screening Level [$\mu\text{g}/\text{m}^3$]
Fluoranthene	3.64E+02 1.400	GWP	GWP 1.5	4.17E-01 Ingestion	Ingestion Risk-Based	Risk-Based N/A
Fluorene	5.48E+01 240	GWP	GWP 1.5	4.17E-01 Ingestion	Ingestion Risk-Based	Risk-Based N/A
Pyrene	3.59E+02 1.000	GWP	GWP 1.1	3.13E-01 Ingestion	Ingestion Risk-Based	Risk-Based N/A
a. Ground Water Protection Via Petroleum Contaminants in Soil Leaching to Ground Water						
b. Maximum contaminant level						
c. Methyl tert-butyl ether						
d. For the ingestion pathway, the source of the target level is indicated (MCL or a risk-based calculation); for the inhalation pathway the critical receptor is indicated (child or age-adjusted individual).						
e. Soil vapor measurements obtained at greater than 3-5 feet below ground surface.						

(5-8-09)()

03. Table 3. Default Toxicity Values for Risk Evaluation.

DEFAULT TOXICITY VALUES FOR RISK EVALUATION									
CHEMICALS	CAS-Number ^a	Slope-Factor			Reference-Dose			Oral-RA ^b -Factor	Dermal-RA-Factor
		Oral (SF _o)	Inhalation (SF _i)	Oral (RfD _o)	Inhalation (RfD _i)				
CHEMICALS	CAS Number ^a	Oral Slope Factor (SF _o) (kg-day/mg)	Inhalation Unit Risk (IUR) ($\mu\text{g}/\text{m}^3$)	Oral Reference Dose (RfD _o) (mg/kg-day)	Inhalation Reference Concentration (RfC) (mg/m ³)	Oral RA ^b -Factor (RAF _o)	Dermal RA-Factor (RAF _d)		
Benzene	71-43-2	0.055	0.027 7.8E-06	0.004	0.0086 0.03	1	0.0005 0		
Toluene	108-88-3	NA	NA	0.08	4.43 5.0	1	0.03 0		
Ethylbenzene	100-41-4	0.011	0.009 2.5E-06	0.1	0.29 1.0	1	0.03 0		

DEFAULT TOXICITY VALUES FOR RISK EVALUATION										
CHEMICALS	CAS-Number ^a	Slope-Factor			Reference-Dose			Oral-RA ^b -Factor	Dermal-RA-Factor	
		Oral (Sf _o)	Inhalation (Sf _i)	Oral (RfD _o)	Inhalation (RfD _i)					
CHEMICALS	CAS-Number ^a	Oral Slope Factor (SF _o) (kg-day/mg)	Slope Factor (kg-day/mg) Inhalation Unit Risk (IUR) (ug/m ³)	Oral Reference Dose (RfD _o) (mg/kg-day)	Slope Factor (mg/kg-day) Inhalation Reference Concentration (RfC) (mg/m ³)	Oral RA ^b Factor (RAF _o)	Dermal RA Factor (RAF _d)			
Total Xylenes	1330-20-7	NA	NA	0.2	0.029 0.1	1	0.03 0			
Naphthalene	91-20-3	NA	0.12 3.4E-05	0.02	0.00086 0.003	1	0.13			
MTBE ^c	1634-04-4	0.0018	0.00004 2.6E-07	NA	0.86 3.0	1	0.0005 0			
1,2-Dichloroethane	107-06-2	0.091	0.094 2.6E-05	NA 0.006	0.69 0.007	1	0.03 0			
Ethylene Dibromide	106-93-4	2	2.4 6.0E-04	0.009	0.0026 0.009	1	0.03 0			
Acenaphthene	83-32-9	NA	NA	0.06	NA	1	0.13			
Anthracene	120-12-7	NA	NA	0.3	NA	1	0.13			
Benz(a)anthracene	56-55-3	0.73	0.39 1.1E-04	NA	NA	1	0.13			
Benzo(a)pyrene	50-32-8	7.3	3.9 1.1E-03	NA	NA	1	0.13			
Benzo(b)fluoranthene	205-99-2	0.73	0.39 1.1E-04	NA	NA	1	0.13			
Benzo(k)fluoranthene	207-08-9	0.073	0.39 1.1E-04	NA	NA	1	0.13			
Chrysene	218-01-9	0.0073	0.039 1.1E-05	NA	NA	1	0.13			
Fluoranthene	206-44-0	NA	NA	0.04	NA	1	0.13			
Fluorene	86-73-7	NA	NA	0.04	NA	1	0.13			
Pyrene	129-00-0	NA	NA	0.03	NA	1	0.13			

