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Department of Energy
Richland Field Office
P.O. Box 550
Richland, Washington 99352

9402646

MAY 1994 RECEIVED EPIC

JAN 21 1993

93-RPA-110

RECEIVED MAY 06 1994 CORRESPONDENCE CONTROL

Mr. Thor Cutler
Superfund Response and Investigations Branch
U.S. Environmental Protection Agency (HW-114)
1200 Sixth Avenue
Seattle, Washington 98101

Dear Mr. Cutler:

CERCLA CONTINUOUS RELEASE OF ETHYLENE GLYCOL FOR THE HANFORD SITE

The following is in response to the telephone conversation held between Mr. Teimouri of my staff and yourself on December 17, 1992, same subject. This information is being provided to further substantiate our October 8, 1992, request for an ethylene glycol continuous release reporting relief under CERCLA Section 103(f)(2) for the Hanford Site. An initial notification of a continuous release of ethylene glycol was made to the National Response Center (NRC) on October 7, 1992, by the U.S. Department of Energy (DOE), Richland Field Office (RL) and a CR-ERNS # 139573 has been provided.

Based on the input provided by the RL's managing contractors, the total amount of ethylene glycol released during the calendar year of 1991 is as follows: Westinghouse Hanford Company had a total of 426 pounds spilled in 78 releases, 200 pounds of which are attributed to the stationary sources operating at the Site; Pacific Northwest Laboratory had a total of 21 pounds spilled in 6 releases; and Kaiser Engineering Hanford had a total of 37 pounds spilled in 8 releases. A cumulative total of 484 pounds of ethylene glycol was spilled in 92 reported releases in the calendar year of 1991. All releases of ethylene glycol to the environment, regardless of quantity, are reported to Hanford contractor environmental compliance personnel for record keeping and additional notification determination.

RL and its managing contractors have established procedures to minimize and respond to ethylene glycol spills and ensure future releases are minimized. These include the following: (a) an increased personnel awareness of spill detection by requiring equipment users to conduct a visual inspection and perform a safety walk-around of vehicles and equipment prior to use; (b) inspections of all DOE vehicles are performed every 7000 miles or 6 months. These inspections cover cooling systems, and include replacing hoses when necessary, replacing smaller hoses with threaded type fittings, replacing plastic in-line heater hose tees, and replacing antifreeze if needed. Forklift coolant systems have also been modified with expansion tanks; (c) reporting procedures are established to determine the size of spills for reporting purposes; and (d) Hanford Site response and cleanup of these releases is immediate with no potential for off-site impact to the environment or public.

RL believes, our request for a continuous release reporting relief is consistent with the intent of regulations that regulatory authority need not be notified each time a release of this material equals or exceeds an Reportable Quantity to determine whether a response action is warranted. The U.S. Environmental Protection Agency's goal in promulgating the continuous release reporting regulation (55 FR 30166; 9/24/1990) was to establish a reporting mechanism that minimizes the reporting burden while providing sufficient information to ensure timely and proper evaluation of hazardous substance releases. RL considers spills of ethylene glycol from automotive equipment at the Hanford Site as "routine, anticipated, and intermittent". Also, attached, please find a copy of a similar request recently submitted by the Westinghouse Savannah River Company, a DOE managing contractor, to the EPA Region IV.

If you have any questions, please call Alex E. Teimouri of my staff on (509) 376-6222.

Sincerely,

James D. Bauer

James D. Bauer, Acting Program Manager
Office of Environmental Assurance
Permits, and Policy

EAP:AET

Attachment

cc w/attach:
P. T. Day, EPA
B. G. Erlandson, WHC
K. A. Gano, WHC
H. T. Tilden, PNL
B. J. Dixon, KEH

SECTION I: GENERAL INFORMATION

CR-ERNS Number*: 139573

Type of Report: Indicate below the type of report you are submitting.

☐ Initial Written Notification ☐ Written Notification of a Change in the Source or Composition of a Release ☒ Follow-up Report

If this report is a written notification of a change in the source or composition of a release, indicate below the type of change.

☐ Adding a source ☐ Deleting a source previously reported ☐ Modifying the list of hazardous substances or mixtures released from a previously reported source

Signed Statement: I certify that the hazardous substance releases described herein are continuous and stable in quantity and rate under the definitions in 40 CFR 302.8(a) or 355.4(a)(2)(iii) and that all submitted information is accurate and current to the best of my knowledge.

S. H. Wisness, Acting Program Manager

Name and Position

Date *Signature*

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Part A. Facility or Vessel Information

Name of Facility or Vessel: Hanford Site

Person in Charge of Facility or Vessel

Name of Person in Charge (last name, first name)

Position Acting Program Manager

Telephone No. (509) 376-5441 Alternate Telephone No. (509) 376-6222

Facility Address

Street P. O. Box 1970 County Benton

City Richland State WA Zip Code 99352

Dun and Bradstreet Number for Facility: 03-445-6186

Vessel Port of Registration:

Facility/Vessel Location

Latitude	Deg 46	Min 34	Sec 0
Longitude	Deg 119	Min 36	Sec 0

Vessel Loran Coordinates

-

Part B. Population Information

Population Density

Choose the range that describes the population density within a one-mile radius of your facility or vessel (indicate by placing an "X" in the appropriate blank below).

___ 0 - 50 persons ___ 101 - 500 persons X more than 1000 persons

___ 51 - 100 persons ___ 501 - 1000 persons

Sensitive Populations and Ecosystems

Identify and describe the location of any sensitive populations (e.g., elementary schools, hospitals, retirement communities) or ecosystems (e.g., wetlands, wildlife preserves) within a one-mile radius of your facility or vessel.

** If hazardous substance releases from separate, contiguous, or adjacent facilities are included in this report, one unique CR-ERNS number will represent the entire site report. In this situation, however, releases of the same hazardous substance from different facilities on the site will be evaluated by EPA as if they were released from a single facility.*

SECTION II: SOURCE INFORMATION	CR-ERNS Number
	139573

Part A: Basis for Asserting the Release is Continuous and Stable in Quantity and Rate

For each source of a release of a hazardous substance or mixture from your facility or vessel, provide the following information:

Name of Source: Automotive Equipment Coolant-Antifreeze Leaks

1. Indicate whether the release from this source is either: continuous without interruption _____ or routine, anticipated, intermittent intermittent

2a. Identify the activity(ies) that results in the release from this source (e.g., batch process, filling of a storage tank).

2b. If the release results from a malfunction, describe the malfunction and explain why the release from the malfunction should be considered continuous and stable in quantity and rate. *

Facilty Population over 15,000. Coolant (Ethylene Glycol), release from personal vehicles and equipment is common given the size of the population and the size of the facility (560 Square Miles). Release results from equipment malfunction (i.e., radiator leak). 3,000 - 10,000 vehicles on site at any given time.

3. Identify below how you established the pattern of the release and calculated release estimates.

____ Past release data

X Your knowledge of the facility/vessel's operations and release history

____ Other (explain)

____ Engineering estimates

X Your best professional judgment

** Note that unanticipated events, such as spills, pipe ruptures, equipment failures, emergency shutdowns, or accidents, do not qualify for reduced reporting under CERCLA section 103(f)(2). Unanticipated events are not incidental to normal operations and, by definition, are not continuous or anticipated, and are not sufficiently predictable or regular to be considered stable in quantity and rate.*

SECTION II: SOURCE INFORMATION (continued)	CR-ERNS Number
	139573

Name of Source: Automotive Equipment Coolant Antifreeze Leaks

Part B: Specific Information on the Source

For the source identified above, provide the following information. If the information requested below is not applicable to the identified source, please write "NA" in the blanks provided.

AFFECTED MEDIUM. Identify the environmental medium (i.e., air, surface water, soil, or ground water) that is affected by the release from this source. If the medium affected is air, please also specify whether the source is a stack or a ground-based area source. If your source releases hazardous substances to more than one medium (e.g., a wastepile releasing to air and ground water), complete Section II, Parts A, B, and C, of this format for each medium affected.

⊘ Air ____ (stack ____ area ____)

Identified Source	Required Information
• Stack	Stack height: _____ feet or meters
• Area (e.g., Waste Pile, Landfill, Valves, Tank Vents, Pump Seals)	Surface area or area of release source: _____ square feet or square meters

⊘ Surface Water ____

- If the release affects any surface water body, give the name of the water body.

  _____

- If the release affects a stream, give the stream order or average flow rate, in cubic feet per second.

  stream order: _____ or average flow rate: _____ cubic feet/second

- If the release affects a lake, give the surface area of the lake in acres and the average depth in meters.

  surface area of lake: _____ acres and average depth of lake: _____ meters

⊘ Soil or Ground Water X

- If the release is on or under ground, give the location of any water wells within a two-mile radius of the site.

  _____

Optional Information

The following information is not required in the final rule; however, such information will assist EPA in evaluating the risks associated with the continuous release. If this information is not provided, EPA will make conservative assumptions about the appropriate values. Please note that the units specified below are suggested units. You may use other units; however, be certain that the units are clearly identified.

- For a stack release to air, provide the following information, if available:

  Inside Diameter _____ feet or meters

  Gas Exit Velocity _____ meters/second or feet/second

  Gas Temperature _____ degrees Kelvin, Celsius, or Farenheit

- For a release to surface water, provide the following information, if available:

  Average Velocity of Surface Water _____ feet/second

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SECTION II: SOURCE INFORMATION (continued)

CR-ERNS Number
139573

Part C. Identity and Quantity of Each Hazardous Substance or Mixture Released From Each Source Identified in Part B of Section II

Name of Source: Automotive Equipment Coolant Antifreeze Leaks

List each hazardous substance released from the source identified above and provide the following information. (For an example, see Table 1 of the Guide.)

Name of Hazardous Substance	CASRN #	Normal Range (in lbs. or kg)* Upper Bound	Normal Range (in lbs. or kg)* Lower Bound	Number of Releases (per year)	Total Annual Quantity Released (in lbs. or kg)*	Months During Which the Release Occurs
Ethylene Glycol	107211	100 Lbs.	0	73	144 Lbs.	October 1, 1992 - September 30, 1993

List each mixture released from the source identified above and provide the following information. (For an example, see Table 2 of the Guide.)

Name of Mixture	Normal Range of Mixture (in lbs. or kg)* Upper Bound	Normal Range of Mixture (in lbs. or kg)* Lower Bound	Number of Releases (per year)	Total Annual Quantity of Mixture Released (in lbs. or kg)*	Months During Which the Release Occurs	Name of Hazardous Substance Components	CASRN #	Weight Percentage	Normal Range of Hazardous Substance Components (in lbs. or kg)* Upper Bound	Normal Range of Hazardous Substance Components (in lbs. or kg)* Lower Bound

* *Please be sure to include units where appropriate. Also, if the release is a radionuclide, units of curies (Ci) are appropriate.*

SECTION III: HAZARDOUS SUBSTANCE INFORMATION	CR-ERNS Number
	139573

Calculation of the SSI Trigger

List each hazardous substance or hazardous substance component of a mixture from each source for which you report release quantities in Section II, Part C. For an example of how to complete this section, refer to Table 3 of the Guide.

Name of Hazardous Substance: Ethylene Glycol

To calculate the SSI trigger (i.e., the upper bound of the normal range of a release) for the hazardous substance identified above, aggregate the upper bounds of the normal range of the identified hazardous substance across all sources identified in Section II, Part C. If the hazardous substance is also a component of a mixture, be certain to include the upper bound of the component as calculated in Section II, Part C, in your calculation of the SSI trigger.

Name of Source(s)	SSI Trigger (specify lbs, kg, or Ci)
Vehicle/Equipment	100 Lbs.

SSI trigger for this hazardous substance release: 100 Lbs.

This method for calculating the SSI trigger for the hazardous substance assumes that all releases of the same hazardous substance or mixture occur simultaneously. To the extent that a hazardous substance is released from your facility from different sources and at different frequencies, you may adjust the SSI trigger, as appropriate, so that it more accurately reflects the frequency and quantity of the release. The SSI trigger in the final analysis must reflect the upper bound of the normal range of the release, taking into consideration all sources of the release at the facility or vessel. The normal range of the release includes all releases previously reported or occurring over a 24-hour period during the previous year.

☆U.S. GOVERNMENT PRINTING OFFICE: 1991 - 548-107/20568

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SECTION I: GENERAL INFORMATION

CR-ERNS Number*: 123147

Type of Report: Indicate below the type of report you are submitting.

[X] Initial Written Notification [ ] Written Notification of a Change in the Source or Composition of a Release [ ] Follow-up Report

If this report is a written notification of a change in the source or composition of a release, indicate below the type of change.

[ ] Adding a source [ ] Deleting a source previously reported [ ] Modifying the list of hazardous substances or mixtures released from a previously reported source

Signed Statement: I certify that the hazardous substance releases described herein are continuous and stable in quantity and rate under the definitions in 40 CFR 302.8(a) or 355.4(a)(2)(iii) and that all submitted information is accurate and current to the best of my knowledge.

for R. R. Campbell VP/ESH&QA
Name and Position

6/29/92
Date

Signature

Part A. Facility or Vessel Information

Name of Facility or Vessel: Savannah River Site

Person in Charge of Facility or Vessel:
Name of Person in Charge (last name, first name) Roberts, Jack S.
Position WSRC Manager, Environmental Protection Department
Telephone No. (803) 725-1728 Alternate Telephone No. (803) 725-2696

Facility Address:
Street P.O. Box 616 County Aiken
City Aiken State SC Zip Code 29802

Dun and Bradstreet Number for Facility: 16-944-5433

Vessel Port of Registration:

Facility/Vessel Location:

Latitude	Deg 33	Min 15	Sec 10	Vessel Loran Coordinates
Longitude	Deg 81	Min 39	Sec 28	•

Part B. Population Information

Population Density: Choose the range that describes the population density within a one-mile radius of your facility or vessel (indicate by placing an "X" in the appropriate blank below).

___ 0 - 50 persons ___ 101 - 500 persons X more than 1000 persons
___ 51 - 100 persons ___ 501 - 1000 persons

Sensitive Populations and Ecosystems: Identify and describe the location of any sensitive populations (e.g., elementary schools, hospitals, retirement communities) or ecosystems (e.g., wetlands, wildlife preserves) within a one-mile radius of your facility or vessel.

- Wetlands

*If hazardous substance releases from separate, contiguous, or adjacent facilities are included in this report, one unique CR-ERNS number will represent the entire site report. In this situation, however, releases of the same hazardous substance from different facilities on the site will be evaluated by EPA as if they were released from a single facility.

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SECTION II: SOURCE INFORMATION	CR-ERNS Number

Part A: Basis for Asserting the Release is Continuous and Stable in Quantity and Rate

For each source of a release of a hazardous substance or mixture from your facility or vessel, provide the following information:

Name of Source: Automotive Equipment Coolant - Antifreeze Leaks

1. Indicate whether the release from this source is either: continuous without interruption _____
or
routine, anticipated, intermittent intermittent

2a. Identify the activity(ies) that results in the release from this source (e.g., batch process, filling of a storage tank).

2b. If the release results from a malfunction, describe the malfunction and explain why the release from the malfunction should be considered continuous and stable in quantity and rate.*

Facility Population over 20,000. Coolant (Ethylene Glycol), releases from personal vehicles and equipment is common given the size of the population and the size of the facility (320 Square Miles). Release results from equipment malfunction (i.e., radiator leak). 2,000 - 10,000 vehicles on site at any given time.

3. Identify below how you established the pattern of the release and calculated release estimates.

___ Past release data

X Your knowledge of the facility/vessel's operations and release history

___ Other (explain)

___ Engineering estimates

X Your best professional judgment

*Note that unanticipated events, such as spills, pipe ruptures, equipment failures, emergency shutdowns, or accidents, do not qualify for reduced reporting under CERCLA section 103(f)(2). Unanticipated events are not incidental to normal operations and, by definition, are not continuous or anticipated, and are not sufficiently predictable or regular to be considered stable in quantity and rate.

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SECTION II: SOURCE INFORMATION (continued)	CR-ERNS Number

Name of Source: Automotive Equipment Coolant Antifreeze Leaks

Part B: Specific Information on the Source

For the source identified above, provide the following information. If the information requested below is not applicable to the identified source, please write "NA" in the blanks provided.

AFFECTED MEDIUM. Identify the environmental medium (i.e., air, surface water, soil, or ground water) that is affected by the release from this source. If the medium affected is air, please also specify whether the source is a stack or a ground-based area source. If your source releases hazardous substances to more than one medium (e.g., a wastepile releasing to air and ground water), complete Section II, Parts A, B, and C, of this format for each medium affected.

Air ____ (stack ____ area ____)

Identified Source	Required Information
• Stack	Stack Height: _____ feet or meters
• Area (e.g., Waste Pile, Landfill, Valves, Tank Vents, Pump Seals)	Surface area or area of release source: _____ square feet or square meters

Surface Water ____

- If the release affects any surface water body, give the name of the water body.

  _____

- If the release affects a stream, give the stream order or average flow rate, in cubic feet per second.

  stream order: _____ or average flow rate: _____ cubic feet/second

- If the release affects a lake, give the surface area of the lake in acres and the average depth in meters.

  surface area of lake: _____ acres and average depth of lake: _____ meters

Soil or Ground Water X

- If the release is on or under ground, give the location of any water wells within a two-mile radius of the site.

  See attached USGS maps for Site

Optional Information

The following information is not required in the final rule; however, such information will assist EPA in evaluating the risks associated with the continuous release. If this information is not provided, EPA will make conservative assumptions about the appropriate values. Please note that the units specified below are suggested units. You may use other units; however, be certain that the units are clearly identified.

- For a stack release to air, provide the following information, if available:

  Inside Diameter _____ feet or meters

  Gas Exit Velocity _____ meters/second or feet/second

  Gas Temperature _____ degrees Kelvin, Celsius, or Farenheit

- For a release to surface water, provide the following information, if available:

  Average Velocity of Surface Water _____ feet/second

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SECTION II: SOURCE INFORMATION (continued)

CR-ERNS Number

Part C. Identity and Quantity of Each Hazardous Substance or Mixture Released From Each Source Identified in Part B of Section II

Name of Source: Automotive Equipment Coolant - Antifreeze Leaks

List each hazardous substance released from the source identified above and provide the following information. (For an example, see Table 1 of the Guide.)

Name of Hazardous Substance	CASRN #	Normal Range (in lbs. or kg)* Upper Bound	Normal Range (in lbs. or kg)* Lower Bound	Number of Releases (per year)	Total Annual Quantity Released (in lbs. or kg)*	Months During Which the Release Occurs
Ethylene Glycol	107211	100 lbs.	0	100	1,000	Jan. - Dec.

List each mixture released from the source identified above and provide the following information. (For an example, see Table 2 of the Guide.)

Name of Mixture	Normal Range of Mixture (in lbs. or kg)* Upper Bound	Normal Range of Mixture (in lbs. or kg)* Lower Bound	Number of Releases (per year)	Total Annual Quantity of Mixture Released (in lbs. or kg)*	Months During Which the Release Occurs	Name of Hazardous Substance Components	CASRN #	Weight Percentage	Normal Range of Hazardous Substance Components (in lbs. or kg)* Upper Bound	Normal Range of Hazardous Substance Components (in lbs. or kg)* Lower Bound

* Please be sure to include units where appropriate. Also, if the release is a radionuclide, units of curies (Ci) are appropriate.

(6)

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SECTION III: HAZARDOUS SUBSTANCE INFORMATION	CR-ERNS Number

Calculation of the SSI Trigger

List each hazardous substance or hazardous substance component of a mixture from each source for which you report release quantities in Section II, Part C. For an example of how to complete this section, refer to Table 3 of the Guide.

Name of Hazardous Substance: Ethylene Glycol

To calculate the SSI trigger (i.e., the upper bound of the normal range of a release) for the hazardous substance identified above, aggregate the upper bounds of the normal range of the identified hazardous substance across all sources identified in Section II, Part C. If the hazardous substance is also a component of a mixture, be certain to include the upper bound of the component as calculated in Section II, Part C, in your calculation of the SSI trigger.

Name of Source(s)	SSI Trigger (specify lbs, kg, or Cl)
Vehicle/Equipment	100 lbs.

SSI trigger for this hazardous substance release: 100 lbs.

This method for calculating the SSI trigger for the hazardous substance assumes that all releases of the same hazardous substance or mixture occur simultaneously. To the extent that a hazardous substance is released from your facility from different sources and at different frequencies, you may adjust the SSI trigger, as appropriate, so that it more accurately reflects the frequency and quantity of the release. The SSI trigger in the final analysis must reflect the upper bound of the normal range of the release, taking into consideration all sources of the release at the facility or vessel. The normal range of the release includes all releases previously reported or occurring over a 24-hour period during the previous year.

CORRESPONDENCE DISTRIBUTION COVERSHEET

Author	Addressee	Correspondence No.
A3-42		
J. D. Bauer, RL (J. R. Culmer, WHC)	T. Cutler, EPA	Incoming: 9402646 (Xref: 9350146)

Subject: CERCLA CONTINUOUS RELEASE OF ETHYLENE GLYCOL FOR THE HANFORD SITE

INTERNAL DISTRIBUTION

Approval	Date	Name	Location	w/att
		Correspondence Control	A3-01	
		S. M. Belisle	H6-20	
		G. D. Carpenter	H6-20	
		J. R. Culmer	X0-21	
		L. P. Diediker	T1-30	
		P. J. Mackey	B3-15	
		W. T. Dixon, Assignee	H6-21	
		B. G. Erlandson	H6-20	
		K. A. Gano	X0-21	
		E. M. Greager	H6-30	
		R. J. Landon	H6-22	
		H. E. McGuire, Level I	B3-63	
		J. P. Zoric	X0-21	
		EDMC	~~H4-22~~	

Wrong MSIN

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