Tim Bishop
Project Manager
Marketing Business Unit

Chevron Environmental Management Company
6101 Bollinger Canyon Road
San Ramon, CA 94583
Tel (925) 790-6463
TimBishop@chevron.com

June 25, 2014

Ms. Teena Le/Dilan Roe
Alameda County Health Care Services
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

RE: Final Waste Manifest
7850 Amador Valley Boulevard, Dublin, California
Fuel Leak Case No.: RO0000482

Dear Ms. Le and Ms. Roe:

I declare under penalty of perjury that to the best of my knowledge the information and/or recommendations contained in the attached report is/are true and correct. The attached Waste Manifest documents the transportation and disposal of waste generated during the decommissioning of 5 groundwater monitoring wells associated with the site.

If you have any questions or need additional information, please contact me at 925.790.6463 or by e-mail me at TimBishop@chevron.com.

Sincerely,

Tim Bishop
Union Oil of California – Project Manager

Attachment
Final Waste Manifest

ARCADIS U.S., Inc.
2000 Powell Street
7th Floor
Emeryville
California 94608
Tel 510.562.4500
Fax 510.652.4906
www.arcadis-us.com

Ms. Teena Le/Dilan Roe
Alameda County Health Care Services
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

Subject:
RO482 - Waste Manifest

ENVIRONMENT

Dear Ms. Le and Ms. Roe:

Date:
June 25, 2014

On behalf of Chevron Environmental Management Company, for itself and as Attorney-in-Fact for Union Oil Company of California (hereinafter "EMC"), ARCADIS U.S., Inc (ARCADIS) is pleased to submit the enclosed waste manifest for the following facility:

Facility No.	**Case No.**	**Location**
7176	RO0000482	7850 Amador Valley Boulevard Richmond, California

If you have any questions, please contact me at 510.596.9675.

Sincerely,

ARCADIS

Katherine Brandt

Katherine Brandt, P.G.
Certified Project Manager

Contact:
Katherine Brandt

Phone:
510.596.9675

Email:
Katherine.Brandt@
arcadis-us.com

Our ref:
B0047944.2013

Copies:
Mr. Tim Bishop, EMC (electronic copy only)
Ms. Cherie McCaulou, San Francisco Bay Regional Water Quality Control Board (GeoTracker)

One Team Waste Services

6520 Corporate Drive
Indianapolis, Indiana 46278
Telephone: (317) 291-7007 Fax: (317) 328-2666
www.CRAworld.com

PROJECT SUMMARY

TO:	North American Waste Tracking Desk	REF. NO:	060715-WR2197
CHEVRON PM:	Tim Bishop	EMC BUSINESS UNIT:	MBU
FROM:	Nate Sermersheim/kg/1 NJS	DATE:	June 19, 2014
SUPPLIER PM:	Katherine Brandt	SUPPLIER COMPANY	Arcadis

RE: Former Unocal 351788–WR2197-060715 - Disposal of Non-Hazardous Waste

This summary is for Waste Pick-up, Transportation, and Disposal of 2drums of Non DOT Regulated Material (Construction, demolition debris, non-regulated) generated from well destruction activities for Waste Request WR2197.

GENERATOR/SITE INFORMATION

Facility ID: 351788
Facility Name: Former Unocal 351788
Location: 7899 Amador Valley Blvd.
Dublin, CA 94568

WASTESTREAM INFORMATION

Profile: 554389
Non DOT Regulated Material (Construction, demolition debris, non-hazardous)

SHIPPING INFORMATION

Transporter: Belshire

DISPOSAL FACILITY INFORMATION

Manifest No.: WR2197-001
Ship Date: 6/5/14
Facility: Veolia Environmental Services Azusa, California
Received Date: 6/12/14
Location: 1704 West 1st Street
Azusa, CA 91702

ATTACHMENTS

Final Manifest(s)/Bill of Lading	☑	DTSC Stamped Manifest	☐
Generator Manifest(s)/Bill of Lading	☑	LDR (if applicable)	☐
Profile Approval (if available)	☐	Signed Profile	☑
Analytical/MSDS	☑	Certificate of Destruction (COD)	☐
Other: California Non-Hazardous Materials Certification	☑		

351788

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
N/A	1	(800) 424-9300	WR2197-001

GENERATOR

5. Generator's Name and Mailing Address
Chevron Environmental Management Co.
c/o Chevron Products Company Waste Desk
P.O. Box 6004
San Ramon, CA 94583
Generator's Phone: (877) 386-6044

Generator's Site Address (if different than mailing address)
Former Unocal 351788
7899 Amador Valley Blvd.
Dublin, CA 94568

6. Transporter 1 Company Name: BELSHIRE — U.S. EPA ID Number: CAR000183913

7. Transporter 2 Company Name: BELSHIRE — U.S. EPA ID Number: CAR000183913

8. Designated Facility Name and Site Address
Veolia ES Technical Solutions, LLC - Azusa
1704 W. First St.
Azusa, CA 91702
Facility's Phone: (626) 334-5117

U.S. EPA ID Number: CAD008302903

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	Non DOT Regulated Material (Construction, demolition debris, non regulated)	002	DM	675	P	H141
2.						
3.						
4.						

13. Special Handling Instructions and Additional Information
Process: Investigation and Remediation of Past Contamination
BESI:240371
ERG: N/A
BUSINESS UNIT: MBU
SITE ID: 351788
WR2197
PROFILE #: 554389
WEAR LEVEL D PPE & SPLASH PROTECTION (IF APPLICABLE)

14. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: Larry Moothart of BESI on behalf of generator — Signature — Month: 06 Day: 05 Year: 14

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Larry Moothart — Signature — Month: 06 Day: 05 Year: 14

Transporter 2 Printed/Typed Name: MIKE LAMBUTH — Signature — Month: 6 Day: 12 Year: 14

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month: Day: Year:

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Cristina Sanchez — Signature: Cristina Sanchez — Month: 06 Day: 12 Year: 14

169-BLC-O 6 10498 (Rev. 9/09)

DESIGNATED FACILITY TO GENERATOR

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
	N/A	1	(800) 424-9300	WR2197-001

5. Generator's Name and Mailing Address
Chevron Environmental Management Co.
c/o Chevron Products Company Waste Desk
P.O. Box 6004
San Ramon, CA 94583
Generator's Phone: (877) 366-8044

Generator's Site Address (if different than mailing address)
Former Unocal 351738
7899 Amador Valley Blvd.
Dublin, CA 94568

6. Transporter 1 Company Name
BESHIPS

U.S. EPA ID Number
CAR000188912

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
Veolia ES Technical Solutions, LLC - Azusa
1704 W. First St.
Azusa, CA 91702
Facility's Phone: (626) 334-5117

U.S. EPA ID Number
CAD008302903

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	Non DOT Regulated Material (Construction, demolition debris, non regulated)	003	CM	675	P	
2.						
3.						
4.						

13. Special Handling Instructions and Additional Information
Process: Investigation and Remediation of Fuel Contamination
BESI:240371
ERG: N/A
BUSINESS UNIT: MBU
SITE ID: 351738
WR2197
PROFILE #: 664388
WEAR LEVEL D PPE & SPLASH PROTECTION (IF APPLICABLE)

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: Larry Meathurt of BESI on behalf of generator
Signature:
Month: 06 Day: 05 Year: 14

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Larry Meathurt
Signature:
Month: 06 Day: 05 Year: 14

Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month: Day: Year:

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name:
Signature:
Month: Day: Year:

GENERATOR | INT'L | TRANSPORTER | DESIGNATED FACILITY

2197

VEOLIA
ENVIRONMENTAL SERVICES

WASTESTREAM INFORMATION PROFILE

☐ Recertification

Disposal Code

Veolia ES LOCATION | **1704 West 1st Street** ADDRESS | **Azusa** CITY | **CA** ST

☐ Invoice Address

Chevron EMC, c/o CRA, Inc. 5900 Hollis Street, Ste A, Emeryville, CA 94608

☐ Manifest from – blank if direct

Veolia ES TSDF requested **AZUSA** Technology requested ____ Generator No. ____ **Generator EPA ID No.** ____

1. **Generator Name** Former Unocal 351788 **Generator State No.** N/A
   Address 7899 Amador Valley Blvd **State Wastestream No.** ____
   City Dublin **State** CA **Country** USA **ZIP** 94568
   NAICS (SIC) Code **Source** ____ **Origin** ____ **Form** ____ **System Type** ____

2. **Waste Name** Construction, Demolition debris, non-regulated **Lab or Waste Area** ____

3. **Process Generating Waste** Investigation or remediation of past contamination associated with UST corrective action CFR 40 part 280.

4. **Shipping Name** NON DOT REGULATED MATERIAL (CONSTRUCTION, DEMOLITION DEBRIS, NON-REGULATED)

   Hazard Class 0 **UN/NA No.** N/A **PG** N/A **RQ amt** 0 lb

RQ Desc:	1. N/A	2.
DOT Desc:	1. N/A	2.

5. **Waste Codes** N/A

Wastewater ☐ **Non Wastewater** ☐ **Sub Category** ____

6. **Physical and chemical properties** *(check all that apply)*

pH
- a ☐ < 2
- b ☐ 2 - 5
- c ☐ 5 - 9
- d ☐ 9 - 12.5
- e ☐ > 12.5

n/a___ exact

Specific Gravity
- a ☐ < .8
- b ☐ .8 - 1.0
- c ☐ 1.0
- d ☐ 1.0 - 1.2
- e ☒ > 1.2

____ exact

Flash Point (F)
- a ☐ < 80
- b ☐ 80 - 100
- c ☐ 101 - 140
- d ☐ 141 - 200
- e ☐ > 200
- f ☒ no flash ____exact

Solids
- 0 % suspended
- 100 % settleable
- 0 % dissolved

Free Liquid Range 0 to 0 %

- unk % ash
- ____ water solubility
- <2000 BTU/lb

Physical State
- s ☒ solid
- m ☐ semi-solid
- l ☐ liquid
- p ☐ pumpable semi-solid
- f ☐ flowable powder
- g ☐ gas
- a ☐ aerosol
- r ☐ pressurized liquid
- d ☐ debris per 40 CFR 268.45
- h ☐ sharps

Hazardous Characteristics
- a ☐ air reactive
- w ☐ water reactive
- c ☐ cyanide reactive
- f ☐ sulfide reactive
- e ☐ explosive
- o ☐ oxidizing acid
- p ☐ peroxide former
- r ☐ radioactive or NRC regulated
- s ☐ shock sensitive
- t ☐ temp sensitive
- m ☐ polymerization/monomer
- n ☐ OSHA carcinogen
- I ☐ infectious
- h ☐ inhalation hazard Zone: ____

Odor
- a none ☒
- b mild ☐
- c strong ☐

describe____

Halogens
- Br ____ % Bromine
- Cl ____ % Chlorine
- F ____ % Fluorine
- I ____ % Iodine

Layers:	a ☐ **multilayered:**	b ☐ **bi-layered:**	c ☒ **single phase:**
	Top Layer	Second Layer	Bottom Layer
Viscosity by Layer:	☐ high (syrup)	☐ high (syrup)	☐ high (syrup)
	☐ medium (oil)	☐ medium (oil)	☐ medium (oil)
	☐ low (water)	☐ low (water)	☐ low (water)
	☒ solid	☒ solid	☒ solid

Color
Varies
____
____

Used oil y/n N **HOC <1000 ppm** ☐ **or > 1000 ppm** ☐

WIP No. ____

7. **Chemical Composition** [M = Marine Pollutant, S - Severe Marine Pollutant, O = Ozone Depleting Substance, U = Underlying Hazardous Constituent, B = Benzene NESHAP, T = TRI Chemical, C = OSHA Carcinogen]

	Constituents	Range	Units		Constituents	Range	Units
	Concrete/asphalt/PVC/Metal	**100**	**%**				
	Material not contaminated						
	Clean Waste (not contaminated)						

Total Composition Must Equal or Exceed 100%

Other:

8. Is the wastestream being imported into the USA? Yes ☐ No ☒
9. Does the wastestream contain PCBs regulated by 40CFR? Yes ☐ No ☒
   PCB concentration _____ppm
10. Is the wastestream subject to the Marine Pollutant Regulations? Yes ☐ No ☒
11. Is the wastestream subject to Benzene NESHAP? Yes ☐ No ☒
    If yes, is the wastestream subject to Notification and Control Requirements? Yes ☐ No ☒
    Benzene concentration _____ ppm
12. Is the wastestream subject to RCRA subpart CC controls? Yes ☐ No ☒
    Volatile organic concentration, if known _____ ppmw
    CC approved analytical method ☐ Generator Knowledge ☐
13. Is the wastestream from a CERCLA or state mandated cleanup? Yes ☒ No ☐

14. **Container Information** *(Identify UN container marking if known)*
    Packaging: Bulk Solid ☐ Type/Size: _____ **Bulk Liquid** ☐ Type/Size: _____ **Drum** ☒ Type/Size: **DM/55 Gallons**
    Other _____
    Shipping Frequency: Units 2 Per Month ☐ Quarter ☐ Year ☐ One Time ☐ Other **As needed**

15. **Additional Information:** _____

Wear Level D PPE / Gloves / Safety Goggles

_____

_____

Is analytical or an MSDS available that describes the waste? Yes ☒ No ☐ If yes, please attach.

GENERATOR CERTIFICATION

I hereby certify that all information submitted in this and all attached documents contains true and accurate descriptions of this waste. Any sample submitted is representative as defined in 40 CFR 261 - Appendix I or by using an equivalent method. All relevant information regarding known or suspected hazards in the possession of the generator has been disclosed. I authorize sampling of any waste shipment for purposes of recertification.

Sean Grady, as agent for CEMC	317-291-7012	5-1-14
NAME (PRINT OR TYPE)	**PHONE**	**DATE**
SIGNATURE	SME/Conestoga-Rovers and Associates	**TITLE**

FACILITY NOTIFICATION

If approved for management, Veolia ES has all the necessary permits and licenses for the waste that has been characterized and identified by this profile.

TSDF PROCESSING USE ONLY: PPE REQUIRED No _____ Yes _____ Describe _____

WIP No. _____

VEOLIA ENVIRONMENTAL SERVICES
WIP INSTRUCTIONS

Veolia ES requires completion of all sections of the Wastestream Information Profile (WIP). Sections not applicable to the wastestream must have N/A written in the space provided.

Documented WIP information is used to comply with TSDF Waste Analysis Plans, RCRA and DOT regulations, Emergency Planning and Community Right-to-Know Act (EPCRA), Pollution Prevention Act, Toxic Release Inventory Report and other regulatory and generator requirements.

MARINE POLLUTANT

- The wastestream is subject to the Marine Pollutant Regulations if:
  1. it is a bulk (>119 gallons) packaging with Marine Pollutant concentration ≥ 10% or Severe Marine Pollutant concentration ≥ 1%

     or
  2. it is non-bulk Marine Pollutant shipped by vessel (boat) in packages larger than 5 liters (liquid) or 5 kg (solid)

     or
  3. it is a non-bulk Severe Marine Pollutant, shipped by vessel (boat) in packages larger than 0.5 liters (liquid) or 0.5 kg (solid).

  Refer to the list of Marine Pollutants.

OZONE DEPLETING SUBSTANCE (ODS)

Refer to the list of Ozone Depleting Substances.

UNDERLYING HAZARDOUS CONSTITUENT (UHC)

Refer to the list of Underlying Hazardous Constituents (40 CFR 268.48)

BENZENE NESHAP

- The wastestream is subject to Benzene NESHAP notification and control requirements if it:
  1. contains > 10 ppm benzene, **and**
  2. is generated by a chemical manufacturing plant, petroleum refinery or coke by-product recovery plant, **and**
  3. the generator's Total Annual Benzene (TAB) is ≥ 10 Mg/yr

TRI CHEMICAL

- The wastestream is subject to Toxic Release Inventory Reporting if it contains a Section 313 Toxic Chemical and meets Qualifier requirements.

OSHA CARCINOGEN

- OSHA promulgated standards in 1974 to regulate the industrial use of 13 chemicals identified as occupational carcinogens. Exposures are to be controlled through the required use of engineering controls, work practices, and personal protective equipment, including respirators. See 29 CFR 1910.1003-1910.1016 for specific details.

RCRA SUB-PART CC CONTROLS

- Subpart CC Air Emission Control requirements apply to large quantity hazardous waste generators and to treatment, storage, and disposal facilities.
- Waste in containers greater than 0.1 cubic meters (i.e., 26.4 gallons) with greater than 500 ppm volatile organics are subject to this rule., unless otherwise exempted. Allowable controls include DOT approved containers, containers with an adequate cover and closure devices, and containers which operate with no detectable emissions (less than 500 ppm).

VEOLIA
ENVIRONMENTAL
SERVICES

1704 W First Street, Azusa, CA 91702
(626) 334-5117

WIP NO. 554389

CALIFORNIA NON-HAZARDOUS MATERIALS CERTIFICATION:

As a generator of this waste I certify that I am aware of the California Title 22 Hazardous Waste Characterization requirements and this waste as profiled to the best of my knowledge meets all of the required criteria listed in Title 22 CCR section 66261.20 through 66261.24 and hence I am classifying this waste as California NON-HAZARDOUS pursuant to these requirements.

Name: Freddie E Robinson Agent on behalf of CEMC

Signature: Freddie E Robinson Date: 5/16/14

Generator's Name: Former Unocal 351788

Generator's US EPA ID No.: N/A

Material Safety Data Sheet

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

Chevron Asphalt Cement

Product Use: Asphalt
Product Number(s): CPS204735 [See Section 16 for Additional Product Numbers]
Company Identification
Chevron Products Company
Marketing, MSDS Coordinator
6001 Bollinger Canyon Road
San Ramon, CA 94583
United States of America

Transportation Emergency Response
CHEMTREC: (800) 424-9300 or (703) 527-3887
Health Emergency
Chevron Emergency Information Center: Located in the USA. International collect calls accepted. (800) 231-0623 or (510) 231-0623
Product Information
MSDS Requests: http://www.chevron.com/contact

SPECIAL NOTES: This is a generic MSDS which describes the health hazards of all Chevron Asphalt Cements. It applies to all Chevron Paving Grade Asphalt Cement products, including all Penetration Grades, AC (Asphalt Cement graded by original viscosity at 140F), AR (Asphalt Cement graded by viscosity of residue from Rolling Thin Film Oven Test), PG (Performance Graded), PBA (Performance Based Asphalts), and PAC (Polymer Modified Asphalt Cement) products.

This MSDS does not apply to Industrial Asphalts (roofing grades), Emulsified Asphalts, or Cutback Asphalts.

SECTION 2 HAZARDS IDENTIFICATION

****

EMERGENCY OVERVIEW

- MAY CAUSE RESPIRATORY TRACT IRRITATION IF INHALED
- HEATING MAY RELEASE HIGHLY TOXIC AND FLAMMABLE HYDROGEN SULFIDE GAS (H2S)
- DO NOT ATTEMPT RESCUE WITHOUT SUPPLIED-AIR RESPIRATORY PROTECTION

****

IMMEDIATE HEALTH EFFECTS
Eye: Not expected to cause prolonged or significant eye irritation. If this material is heated, thermal burns may result from eye contact.
Skin: Contact with the skin is not expected to cause prolonged or significant irritation. Contact with the skin is not expected to cause an allergic skin response. Not expected to be harmful to internal organs if

absorbed through the skin. If this material is heated, thermal burns may result from skin contact.
Ingestion: Not expected to be harmful if swallowed.
Inhalation: The vapor or fumes from this material may cause respiratory irritation. Symptoms of respiratory irritation may include coughing and difficulty breathing. If this material is heated, fumes may be unpleasant and produce nausea and irritation of the eye and upper respiratory tract. Hydrogen sulfide has a strong rotten-egg odor. However, with continued exposure and at high levels, H2S may deaden a person's sense of smell. If the rotten egg odor is no longer noticeable, it may not necessarily mean that exposure has stopped. At low levels, hydrogen sulfide causes irritation of the eyes, nose, and throat. Moderate levels can cause headache, dizziness, nausea, and vomiting, as well as coughing and difficulty breathing. Higher levels can cause shock, convulsions, coma, and death. After a serious exposure, symptoms usually begin immediately.

The U.S. National Institute for Occupational Safety and Health (NIOSH) considers air concentrations of hydrogen sulfide gas greater than 100 ppm to be Immediately Dangerous to Life and Health (IDLH).

DELAYED OR OTHER HEALTH EFFECTS:
Cancer: May cause cancer in laboratory animals, but the available information is inadequate to determine if this material can cause cancer in humans.
Risk depends on duration and level of exposure. See Section 11 for additional information.

SECTION 3 COMPOSITION/ INFORMATION ON INGREDIENTS

COMPONENTS	CAS NUMBER	AMOUNT
Asphalt	8052-42-4	100 %wt/wt

Information on ingredients that are considered Controlled Products and/or that appear on the WHMIS Ingredient Disclosure List (IDL) is provided as required by the Canadian Hazardous Products Act (HPA, Sections 13 and 14). Ingredients considered hazardous under the OSHA Hazard Communication Standard, 29 CFR 1910.1200, are also listed. See Section 15 for additional regulatory information.

SECTION 4 FIRST AID MEASURES

Eye: No specific first aid measures are required. As a precaution, remove contact lenses, if worn, and flush eyes with water. If heated material should splash into eyes, flush eyes immediately with fresh water for 15 minutes while holding the eyelids open. Remove contact lenses, if worn. Get immediate medical attention.
Skin: No specific first aid measures are required. As a precaution, remove clothing and shoes if contaminated. To remove the material from skin, apply a waterless hand cleaner, mineral oil, or petroleum jelly. Then wash with soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse. If the hot material gets on skin, quickly cool in water. See a doctor for extensive burns. Do not try to peel the solidified material from the skin, or use solvents or thinners to dissolve it. The use of vegetable oil or mineral oil is recommended for removal of this material from the skin.
Ingestion: No specific first aid measures are required. Do not induce vomiting. As a precaution, get medical advice.
Inhalation: If exposure to hydrogen sulfide (H2S) gas is possible during an emergency, wear an approved, positive pressure air-supplying respirator. Move the exposed person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention.
Note to Physicians: Administration of 100% oxygen and supportive care is the preferred treatment for poisoning by hydrogen sulfide gas. For additional information on H2S, see Chevron MSDS No. 301.

SECTION 5 FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES:
Flashpoint: (Cleveland Open Cup) > 232 °C (> 450 °F)
Autoignition: 371 °C (700 °F)
Flammability (Explosive) Limits (% by volume in air): Lower: Not Applicable Upper: Not Applicable

EXTINGUISHING MEDIA: Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames.

PROTECTION OF FIRE FIGHTERS:
Fire Fighting Instructions: This material will burn although it is not easily ignited. See Section 7 for proper handling and storage. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.
Combustion Products: Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, and unidentified organic compounds will be evolved when this material undergoes combustion. Combustion may form oxides of: Nitrogen, Sulfur .

SECTION 6 ACCIDENTAL RELEASE MEASURES

Protective Measures: Eliminate all sources of ignition in vicinity of spilled material. If this material is released into a work area, evacuate the area immediately. Persons entering the contaminated area to correct the problem or to determine whether it is safe to resume normal activities must comply with all instructions in the Exposure Controls/PersonalProtection section.
Spill Management: Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible absorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations. If heated material is spilled, allow it to cool before proceeding with disposal methods.
Reporting: Report spills to local authorities as appropriate or required.

SECTION 7 HANDLING AND STORAGE

Precautionary Measures: Do not get in eyes, on skin, or on clothing. This material is typically stored, transported and used at temperatures between 275F (135C) and 325F (163C). DO NOT ADD OR ALLOW WATER TO MIX WITH HOT ASPHALT. Steam generated eruptions may occur. STORE AND TRANSPORT ASPHALT ONLY IN PROPERLY VENTED CONTAINERS. Combustion of asphalt and asphalt vapors may occur. DO NOT MISHANDLE ASPHALT EQUIPMENT. Observe manufacturer's guidelines on proper equipment use.
Do not breathe vapor or fumes. Do not breathe gas. Do not breathe vapor or fumes from heated material. Smoking, eating and drinking, etc. should be prohibited when skin contact with the product or fume condensate is possible. Workers should clean hands and face before smoking, eating and drinking, etc. Do not use solvents to clean hands and face. Use vegetable oils or mineral oil, followed by a thorough washing with soap and water. Avoid contact of heated material with eyes, skin, and clothing. Wash thoroughly after handling.
Unusual Handling Hazards: An ignition source should be considered present in large tanks where asphalt is stored at temperatures above 350 F (176.7C). Deposits can form in the vapor space of large asphalt tanks which may ignite as low as 350 F. Pyrophoric iron sulfide, commonly present in such tanks, may cause ignition below 350 F.
Toxic quantities of hydrogen sulfide (H2S) may be present in storage tanks and bulk transport vessels

which contain or have contained this material. Persons opening or entering these compartments should first determine if H2S is present. See Exposure Controls/Personal Protection -Section 8. Do not attempt rescue of a person over exposed to H2S without wearing approved supplied-air or self-contained breathing equipment. If there is a potential for exceeding one-half the occupational exposure standard, monitoring of hydrogen sulfide levels is required. Since the sense of smell cannot be relied upon to detect the presence of H2S, the concentration should be measured by the use of fixed or portable devices.
General Handling Information: Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.
Static Hazard: Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations which have the potential of generating and accumulating an electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures. For more information, refer to OSHA Standard 29 CFR 1910.106, 'Flammable and Combustible Liquids', National Fire Protection Association (NFPA 77, 'Recommended Practice on Static Electricity', and/or the American Petroleum Institute (API) Recommended Practice 2003, 'Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents'.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL CONSIDERATIONS:
Consider the potential hazards of this material (see Section 2), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

ENGINEERING CONTROLS:
Use in a well-ventilated area. If operating conditions generate vapor or fumes that exceed current government occupational standards, use process enclosures, local exhaust ventilation, or other engineering controls to control exposure.

PERSONAL PROTECTIVE EQUIPMENT
Eye/Face Protection: No eye protection is ordinarily required under normal conditions of use. If this material is heated, wear chemical goggles or safety glasses or a face shield.
Skin Protection: No special protective clothing is normally required. Where splashing is possible, select protective clothing depending on operations conducted, physical requirements and other substances in the workplace. Suggested materials for protective gloves include: Clothing and gloves to protect against hot material.. If this material is heated, wear insulated clothing to prevent skin contact if engineering controls or work practices are not adequate to prevent skin contact.
Respiratory Protection: Determine if airborne concentrations are below the recommended occupational exposure limits for jurisdiction of use. If airborne concentrations are above the acceptable limits, wear an approved respirator that provides adequate protection from this material, such as: Air-Purifying Respirator for Dusts and Mists.
If material is heated and emits hydrogen sulfide, determine if airborne concentrations are below the occupational exposure limit for hydrogen sulfide. If not, wear an approved positive pressure air-supplying respirator. For more information on hydrogen sulfide, see Chevron MSDS No. 301.
Use a positive pressure air-supplying respirator in circumstances where air-purifying respirators may not provide adequate protection.
Occupational Exposure Limits:

Component	Country/ Agency	TWA	STEL	Ceiling	Notation

Asphalt	ACGIH	.5 mg/m3	--	--	--

NOTE ON OCCUPATIONAL EXPOSURE LIMITS: Consult local authorities for acceptable provincial values in Canada. Consult the Canadian Standards Association Standard 94.4-2002 Selection, Use and Care of Respirators.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Attention: the data below are typical values and do not constitute a specification.

Color: Black
Physical State: Semi-solid
Odor: Low odor
pH: Not Applicable
Vapor Pressure: <0.01 psia
Vapor Density (Air = 1): Not Applicable
Boiling Point: 343°C (649.4°F)
Solubility: Soluble in halogenated hydrocarbons and benzene; insoluble in water and alcohols.
Melting Point: 37.8°C (100°F) - 93.3°C (199.9°F) (Softening Point)
Specific Gravity: 0.96 - 1.04 @ 15.6°C (60.1°F) / 15.6°C (60.1°F)
Viscosity: 50 - 20000 poise @ 60°C (140°F)
Evaporation Rate: No data available
Odor Threshold: No data available
Coefficient of Water/Oil Distribution: No data available

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
Incompatibility With Other Materials: May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.
Hazardous Decomposition Products: Hydrogen Sulfide (Elevated temperatures)
Hazardous Polymerization: Hazardous polymerization will not occur.
Sensitivity to Mechanical Impact: No.

SECTION 11 TOXICOLOGICAL INFORMATION

IMMEDIATE HEALTH EFFECTS
Eye Irritation: The eye irritation hazard is based on evaluation of data for similar materials or product components.
Skin Irritation: The skin irritation hazard is based on evaluation of data for similar materials or product components.
Skin Sensitization: The skin sensitization hazard is based on evaluation of data for similar materials or product components.
Acute Dermal Toxicity: The acute dermal toxicity hazard is based on evaluation of data for similar materials or product components.
Acute Oral Toxicity: The acute oral toxicity hazard is based on evaluation of data for similar materials or product components.
Acute Inhalation Toxicity: The acute inhalation toxicity hazard is based on evaluation of data for similar materials or product components.For additional information on the acute toxicity of the components, call the technical information center.
ADDITIONAL TOXICOLOGY INFORMATION:
There is concern about the carcinogenicity of chemical compounds found in asphalts. The International

Agency for Research on Cancer (IARC) reviewed the carcinogenic potential of asphalts in 1985 and again in 1987. At that time, they concluded there was inadequate evidence to decide that asphalts were carcinogenic to humans. Overall, findings from health monitoring studies of asphalt workers are not conclusive. However, asphalt fume condensates and certain chemical components of asphalt fume have been shown to cause cancer in mice when repeatedly applied to the skin and allowed to remain on the skin for a prolonged period of time. In addition, asphalt fume condensates have been shown to be weakly positive in Ames mutagenicity tests. Skin contact and breathing of fumes, mists and vapors should be reduced to a minimum.

SECTION 12 ECOLOGICAL INFORMATION

ECOTOXICITY
This material is not expected to be harmful to aquatic organisms. The product has not been tested. The statement has been derived from the properties of the individual components.

ENVIRONMENTAL FATE
This material is not expected to be readily biodegradable. The product has not been tested. The statement has been derived from the properties of the individual components.

SECTION 13 DISPOSAL CONSIDERATIONS

Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by USEPA under RCRA (40CFR261), Environment Canada, or other State, Provincial, and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.

SECTION 14 TRANSPORT INFORMATION

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

TC Shipping Description: UN3257, ELEVATED TEMPERATURE LIQUID, N.O.S. (ASPHALT), 9, III POTENTIAL HYDROGEN SULPHIDE INHALATION HAZARD

IMO/IMDG Shipping Description: UN3257, ELEVATED TEMPERATURE LIQUID, N.O.S. (ASPHALT), 9, III POTENTIAL HYDROGEN SULPHIDE INHALATION HAZARD

ICAO/IATA Shipping Description: FORBIDDEN IF OFFERED AT TEMPERATURES EQUAL TO OR EXCEEDING 100 C

DOT Shipping Description: UN3257, ELEVATED TEMPERATURE LIQUID, N.O.S. (ASPHALT), 9, III POTENTIAL HYDROGEN SULFIDE INHALATION HAZARD

SECTION 15 REGULATORY INFORMATION

REGULATORY LISTS SEARCHED:
01-1=IARC Group 1
01-2A=IARC Group 2A
01-2B=IARC Group 2B

35=WHMIS IDL

The following components of this material are found on the regulatory lists indicated.
Asphalt 01-2B

CHEMICAL INVENTORIES:
All components comply with the following chemical inventory requirements: AICS (Australia), DSL (Canada), EINECS (European Union), ENCS (Japan), IECSC (China), KECI (Korea), PICCS (Philippines), TSCA (United States).

WHMIS CLASSIFICATION:
This product is not considered a controlled product according to the criteria of the Canadian Controlled Products Regulations.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations. (See Hazardous Products Act (HPA), R.S.C. 1985, c.H-3,s.2).

MSDS PREPARATION:

This Material Safety Data Sheet has been prepared by the Toxicology and Health Risk Assessment Unit, ERTC, P.O. Box 1627, Richmond, CA 94804, (888)676-6183.

Revision Date: JANUARY 31, 2013

SECTION 16 OTHER INFORMATION

HMIS RATINGS: Health: 1 Flammability: 1 Reactivity: 0

Additional Product Number(s): CPS290003, CPS290005, CPS290007, CPS290008, CPS290010, CPS290011, CPS290012, CPS290013, CPS290014, CPS290015, CPS290016, CPS290020, CPS290021, CPS290022, CPS290026, CPS290029, CPS290030, CPS290031, CPS290032, CPS291000, CPS291006, CPS291009, CPS291041, CPS291058, CPS291075, CPS291079, CPS291081, CPS291084, CPS291086, CPS291087, CPS291099, CPS291101, CPS291102, CPS291108, CPS291115, CPS291129, CPS291153, CPS291164, CPS291165, CPS291167, CPS291173, CPS291174, CPS291175, CPS291176, CPS291177, CPS291190, CPS291192, CPS291201, CPS291208, CPS291209, CPS291210, CPS291231, CPS291233, CPS291234, CPS291235, CPS291262, CPS291266, CPS291269, CPS291271, CPS291272, CPS291273, CPS291279, CPS291282, CPS291295, CPS291298, CPS291309, CPS291316, CPS291317, CPS291318, CPS291319, CPS291320, CPS291321, CPS291322, CPS291323, CPS291324, CPS291325, CPS291326, CPS291329, CPS291330, CPS291331, CPS291333, CPS291336, CPS291343, CPS291345, CPS291352, CPS291354, CPS291357, CPS291358, CPS291360, CPS291362, CPS291363, CPS291367, CPS291368, CPS291369, CPS291370, CPS291374, CPS291375, CPS291376, CPS291377, CPS291378, CPS291379, CPS291380, CPS291381, CPS291382, CPS291386, CPS291387, CPS291388, CPS291389, CPS291390, CPS291391, CPS291392, CPS291393, CPS291396, CPS291398, CPS291399, CPS291401, CPS291402, CPS291404, CPS291406, CPS291415, CPS291417, CPS291419, CPS291420, CPS291426, CPS291427, CPS291428, CPS291429, CPS291430, CPS291432, CPS291433, CPS291434, CPS291435, CPS291436, CPS291437, CPS291438, CPS291439, CPS291440, CPS291441, CPS291442, CPS291444, CPS291445, CPS291447, CPS291448, CPS291449, CPS291450, CPS291451, CPS291452, CPS291453, CPS291454, CPS291455, CPS291456, CPS291457, CPS291458, CPS291459, CPS291460, CPS291461, CPS291462, CPS291463, CPS291464, CPS291465, CPS291466, CPS291467, CPS291468, CPS291469, CPS291470, CPS291471, CPS291472, CPS291473, CPS291474, CPS291475, CPS291476, CPS291477, CPS291478, CPS291479, CPS291480, CPS291481, CPS291482, CPS291483, CPS291484, CPS291485, CPS291486, CPS291487, CPS291488, CPS291489, CPS291490, CPS291491, CPS291492, CPS291493, CPS291494,

CPS291495, CPS291496, CPS291497, CPS291498, CPS291499, CPS291500, CPS291501, CPS291502, CPS291503, CPS291504, CPS291505, CPS291506, CPS291507, CPS291508, CPS291509, CPS291510, CPS291511, CPS291512, CPS291513, CPS291514, CPS291515, CPS291516, CPS291517, CPS291518, CPS291519, CPS291520, CPS291521, CPS291522, CPS291523, CPS291524, CPS291525, CPS291526, CPS291565, CPS291593, CPS291594, CPS291595, CPS291599, CPS291601, CPS291602, CPS291603, CPS291604, CPS291605, CPS291609, CPS291679, CPS291684, CPS291687, CPS291688, CPS291692, CPS291693, CPS291694, CPS291697, CPS291700, CPS291702, CPS291705, CPS291707, CPS291708, CPS291710, CPS291712, CPS291715, CPS291717, CPS291719, CPS291725, CPS291730, CPS291742, CPS291750, CPS291751, CPS291803, CPS291880, CPS292133, CPS292206, CPS292610, CPS292611, CPS292612, CPS293222, CPS294521, CPS294525, CPS294527, CPS294544, CPS294546, CPS294547, CPS294548, CPS294549, CPS294566, CPS294568, CPS294569, CPS294578, CPS294602, CPS294604, CPS294606, CPS294608, CPS294610, CPS294612, CPS294614, CPS294616, CPS294618, CPS294620, CPS294622, CPS294624, CPS294626, CPS294628, CPS294634, CPS294674, CPS294676, CPS294678, CPS294680, CPS294682, CPS294684, CPS295154, CPS295248, CPS295678, CPS295679, CPS295680, CPS295683

REVISION STATEMENT: This revision updates the following sections of this Material Safety Data Sheet: 4, 8, 12, 14

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV - Threshold Limit Value	TWA - Time Weighted Average
STEL - Short-term Exposure Limit	PEL - Permissible Exposure Limit
	CAS - Chemical Abstract Service Number
ACGIH - American Conference of Governmental Industrial Hygienists	IMO/IMDG - International Maritime Dangerous Goods Code
API - American Petroleum Institute	MSDS - Material Safety Data Sheet
CVX - Chevron	NFPA - National Fire Protection Association (USA)
DOT - Department of Transportation (USA)	NTP - National Toxicology Program (USA)
IARC - International Agency for Research on Cancer	OSHA - Occupational Safety and Health Administration

The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.