

November 18, 2016

Mr. Ryan Dukowitz
Alaska Department of Environmental Conservation
Procurement Services Unit
555 Cordova Street
Anchorage, AK 99501

**Subject: Inactive Rock Pit Development Plan – Final
Contaminated Soil Repository
ADL 107660 – Pats Creek Road #2 Quarry, Wrangell, Alaska
Hazardous Substance Assessment and Cleanup Term Contract # 18-8036-13**

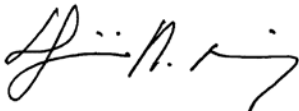
Dear Mr. Dukowitz:

Ahtna Engineering Services, LLC (Ahtna) is submitting this Development Plan to the Alaska Department of Environmental Conservation (ADEC) for NTP 170007506 - Contaminated Soil Repository, Wrangell, Alaska. Our teaming partner, Geosyntec Consultants, prepared the plan under our supervision.

If you have any questions, I may be reached via phone at 907-646-2969, or e-mail at nmuniz@ahtna.net.

Sincerely,

Ahtna Engineering Services, LLC



Herminio (Nino) Muniz, P.G.
Contract Manager

cc: Bruce Wanstall, ADEC

18 November 2016

Mr. Bruce Wanstall
Alaska Department of Environmental Conservation
P.O. Box 111800
410 Willoughby Suite 303
Juneau, AK 99811-1800

**Subject: Inactive Rock Pit Development Plan
ADL 107660 – Pats Creek Road #2 Quarry
Wrangell, Alaska**

Dear Mr. Wanstall:

Geosyntec Consultants, Inc. (Geosyntec) has prepared this development plan for the Alaska Department of Environmental Conservation (ADEC) for submittal to the Alaska Department of Natural Resources (ADNR) Division of Mining, Land and Water. This development plan was prepared in accordance with the “Instructions for Completing a Development Plan,” issued by the ADNR. The development plan has been created for a proposed permanent repository for treated, lead impacted soil within the ADL 107660 – Pats Creek Road #2 Quarry managed by the ADNR (Site), which is an inactive rock pit. The Site is being considered as a suitable repository for approximately 18,350 cubic yards of treated, lead impacted soils generated from the Wrangell Junkyard property emergency removal action completed in July 2016. This development plan is intended to accompany the application for the associated land use permit to permanently place the treated, lead impacted soil at the Site.

BACKGROUND

During an emergency removal action initiated at the Wrangell Junkyard in February 2016, approximately 18,350 cubic yards of lead contaminated soil was excavated, treated and stabilized with ECOBOND[®], and stockpiled at the Wrangell Junkyard. ECOBOND[®], which neutralizes the solubility of lead and retains the lead within the soil matrix (i.e. lead will not leach from the soil),

was reportedly applied to the lead contaminated soils contained in the stockpile¹. Although the treated soil no longer poses a threat to leach into nearby water sources, the treated soil still contains lead and is characterized as a non-hazardous polluted soil and must be disposed of in a permitted facility. The logistics and cost to transport the treated soil to an appropriate solid waste facility in Washington became infeasible and the construction of a monofill repository became the preferred option selected by the ADEC. The goal of the repository is to place and cap the treated soil within the inactive rock pit, thereby reducing contact between surface water and the treated soil and reducing the exposure of the treated soil to humans, wildlife and vegetation. The inactive rock pit is an ideal repository location, as the bedrock floor and existing site topography provide natural barriers to assist with the encapsulation and isolation of the treated soil.

PROJECT DESCRIPTION

The proposed Site is located on Wrangell Island along Pat Creek Road, approximately 8 miles south of the Wrangell Junkyard. The proposed development of the Site would generally include the following activities:

- Mobilizing equipment (bull dozers, compactors, etc.) and ancillary infrastructure (portable toilets, trailers, storage containers, etc.) to the Site;
- Preparing the subgrade of the proposed monofill area at the Site (as needed);
- Hauling treated soil from the Wrangell Junkyard to the Site;
- Placing and compacting the treated soil at the Site to the designed lines and grades (to be determined);
- Constructing an engineered cap designed in accordance with Chapter 60 (Solid Waste Management) of Title 18 of the Alaska Administrative Code (18 AAC 60);
- Installing stormwater drainage features;
- Vegetating the final cap surface with shallow rooted native vegetation to avoid damaging the geosynthetic components of the cap; and
- Maintenance of the closed monofill.

¹ “Remedial Action Report, Wrangell Junkyard, Wrangell, Alaska,” prepared for the State of Alaska Department of Environmental Conservation, Division of Spill Response, prepared by NRC Alaska and Nortech, dated September 30, 2016.

A field investigation will be conducted at the Site to obtain site-specific geologic and hydrologic characteristics that will be used to evaluate the need for a base liner system in accordance with 18 AAC 60.025. The cap system will be designed to accommodate a 25-year, 24-hour storm event in accordance with 18 AAC 60.225 and include appropriate drainage structures to collect and drain stormwater from the cap overlying the treated soil monofill. Conceptually, the proposed cap system will be comprised of a geomembrane barrier layer, a drainage layer (gravel or geosynthetic), and a vegetative soil cover. The actual design of the engineered cap will be based on infiltration modeling that incorporates site-specific geologic and hydrologic data along with the chemical and physical properties of the impacted soil.

Conceptually, the treated soil is proposed to be placed at the southern section of the rock pit, extending north from the southernmost vertical wall a distance of approximately 235 feet. The monofill is proposed to be approximately 38 feet high with maximum slope inclinations of 3:1 (horizontal:vertical). The top deck shall be placed at a slope of 3% to prevent ponding of water and drain water away from the monofill. The conceptual design of the monofill may be revised based on the results of a site survey expected to be conducted by the end of October. Detailed survey data may indicate restrictions or constructability issues with the proposed location of the monofill within the rock pit shown on the attached sketch (blue line drawing) presented in Attachment A. The conceptual design is based on rough topographic information and does not include the resolution necessary to accurately evaluate the proposed location of the monofill within the rock pit at this time.

Following construction of the cap system, the Site use will be non-irrigated open space. No other post-closure uses are proposed for the Site. Long-term maintenance and monitoring will include periodic inspections and the Site will be maintained for erosion in accordance with 18 AAC 60.

Legal Description

The Site is located in the Petersburg B-1 Quadrangle in Section 4, Township 64S, Range 84E of the Copper River Meridian. The legal description of the site is as follows:

BEGINNING AT MILEPOST 1.6 ON THE PAT CREEK ROAD (FOREST ROAD 6259 CENTERLINE); HENCE 130 FEET @ 162 DEGREES TRUE AZIMUTH ALONG THE EXISTING QUARRY ACCESS ROAD TO THE BEGINNING OF THE QUARRY BACK WALL; HENCE 83 FEET @131 DEGREES TRUE, 38 FEET @ 156 DEGREES TRUE, 45 FEET @ 108 DEGREES TRUE, 145 FEET @130 DEGREES TRUE, 45 FEET @ 166 DEGREES

TRUE, 45 FEET @ 197 DEGREES TRUE, 45 FEET @ 232 DEGREES TRUE, AROUND THE TOP OF THE EXISTING QUARRY BACK WALL; HENCE 85 FEET @ 128 DEGREES TRUE, 225 FEET @ 38 DEGREES TRUE, 270 FEET @ 309 DEGREES TRUE, 115 FEET @ 219 DEGREES TRUE, ENCOMPASSING THE AREA OF POTENTIAL EXPANSION OF THIS EXISTING QUARRY FOR AN ESTIMATED 20,000 CUBIC YARDS OF PIT RUN ROCK

Terrain/Ground Cover

The Site is located in a remote area of Wrangell surrounded by dense vegetation. The terrain within the Site generally consists of rock outcrops with some overburden soil and sparse vegetation. The Site is located near Pat Creek approximately 0.1 miles to the south and Pats Lake approximately 1 mile to the southwest.

The inactive rock pit has sufficient area to contain the volume of impacted soil and therefore the monofill will be entirely placed within footprint the rock pit. No disturbance to the surrounding terrain/ground cover is planned as part of this development.

Modifications to the existing terrain within the rock pit will include the following:

- Subgrade preparation, as needed, to support drainage and treated soil placement;
- Placement of 18,350 CY of treated soil to an approximate height of 38 feet above the bottom of the rock pit;
- Placement of an approximate 2-foot thick cap system vegetated with shallow rooted native plant species to avoid damage to the cap system; and
- Construction of drainage ditches to divert stormwater from the monofill.

The conceptual lines and grades of the proposed monofill are shown on the attached sketch (blue line drawing) presented in Attachment A. A USGS map of the site vicinity (Petersburg B-1 Quadrangle) is presented in Attachment B.

Access

Existing and planned access to the Site is provided by Pat Creek Road to the north of the Site. No improvements are expected to be required to Pat Creek Road to accommodate construction traffic. Construction traffic will generally include on-road haul trucks traveling from the Wrangell Junkyard approximately 5 miles south on Zimovia Highway and 3 miles east on Pat Creek Road.

In addition to on-road haul trucks, passenger vehicles, delivery vehicles, and maintenance vehicles are anticipated to access the Site during construction of the monofill.

The Site provides adequate space for truck turnaround to limit congestion during soil hauling therefore no restrictions to public access on Pat Creek Road are anticipated. The Site entrance will be secured from public access with a locked gate.

Buildings and Other Structures

Structures required for the proposed development include a temporary construction trailer, portable toilets, a temporary storage building (if needed), and a security fence and gate near the access point at Pat Creek Road. The temporary construction trailer, portable toilets, and temporary storage buildings will be supported on the existing ground surface of the pit. Some leveling using onsite or imported soil may be required to support these temporary structures. The construction trailer, portable toilets, and temporary storage building will be onsite during construction activities and removed once construction is completed. For the purpose of this development plan, the duration of construction is assumed to be approximately 3 months. The security fence and gate are anticipated to be constructed at the beginning of construction and left in place through the post-closure period to limit public access to the Site. The fence and gate posts will be secured in concrete foundations as required by the manufacturer.

Power Source

Power required for construction activities will be provided by portable generators brought onsite. The portable generators will be de-mobilized from the Site following the completion of the development. A power source is not expected to be required for post-closure maintenance. Therefore, permanent power is not planned as part of this development.

Waste Types, Waste Sources, and Disposal Methods

The purpose of this development is to construct a permanent repository for treated lead impacted soil characterized as non-hazardous polluted soil. The waste is derived from a stockpile of treated lead impacted soil currently located at the Wrangell Junkyard. The stockpile was produced during an emergency removal action initiated by the ADEC and performed by NRC Alaska beginning in February 2016. This impacted soil will be encapsulated with an engineered cap system and closed in place.

Other wastes expected to be generated onsite will be related to construction activities and will include garbage and human waste from portable toilets. Waste hauling companies and portable toilet providers will be contracted to provide collection, transportation, and disposal of waste generated during construction.

Hazardous Substances

The treated, lead impacted soil has been characterized as non-hazardous polluted soil². Therefore, the only hazardous substances anticipated during construction of the monofill will be fuel used to power construction equipment and generators. Any fuel stored onsite will be equipped with secondary containment to contain leaks or spills. Leaks or spills from equipment or vehicles will be immediately cleaned up and properly disposed offsite. Material Safety Data Sheets (MSDS) for anticipated hazardous materials are presented in Attachment C.

Water Supply

Water will be provided by an offsite source and stored onsite in tanker trucks or stationary tanks. Drinking water will be provided to construction personnel in water bottles. Wastewater generated by workers during construction will be collected, transported, and disposed offsite by an approved portable toilet provider.

Parking Areas and Storage Areas

No long-term parking is planned for this development. Short term parking required for construction personnel and approved visitors will be within the footprint of the inactive rock pit. No improvements to the existing ground surface are currently proposed for the development at this time. Onsite personnel will be responsible for periodic checks of vehicles and equipment for leaks or spills. Storage areas will also be contained within the footprint of the inactive rock pit area. Storage areas are anticipated to contain construction materials, construction equipment, geosynthetic materials, soil stockpiles, and other miscellaneous materials required to construct the monofill. If fuel is stored onsite, the fuel storage tank will be equipped with secondary containment and inspected periodically for any leaks. A drip pan or plastic sheeting will be utilized if

² "Remedial Action Report, Wrangell Junkyard, Wrangell, Alaska," prepared for the State of Alaska Department of Environmental Conservation, Division of Spill Response, prepared by NRC Alaska and Nortech, dated September 30, 2016.

maintenance of construction equipment is required. Any leaks or spills identified will be immediately cleaned up and properly disposed offsite. Materials and equipment will only be stored on site during construction activities and will be removed from the Site after completion of the project. The location of temporary parking and storage areas within the inactive rock pit will be determined at the time of construction.

Number of People Using the Site

Currently, the Site is inactive and does not have personnel working onsite. During construction activities, it is estimated that a construction crew consisting of one supervisor, two equipment operators, two laborers, and one third party construction quality assurance (CQA) monitor will work onsite full-time. In addition, truck drivers transporting impacted soil and construction equipment/materials to the Site will be entering and exiting the Site throughout the duration of construction. The ADEC, ADNR, representatives of design consultants, CQA consultants, the contractor or subcontractors, and other approved interested parties may periodically visit the Site during construction of the monofill to observe progress or attend meetings. It is anticipated that representatives of the ADEC will periodically visit the Site during post-closure to perform maintenance and inspections.

The estimated full-time employees working on the Site during construction of the monofill, as described above is six employees with a supervisor/staff ratio of 1:5.

Maintenance and Operations

Following the construction of the capped monofill, periodic Site visits are expected for monitoring and maintenance of the soil cap. The proposed conceptual design does not include a leachate collection and recovery system; therefore, long-term maintenance will be required only for the cap and surface water management features.

Subcontractors are anticipated to perform the majority of the maintenance work of the monofill cap. Visual inspections will take place by the ADEC, or affiliated subcontractors, for at least 60 consecutive months following completion of the cap in accordance with 18 AAC 60.490. Inspections will check for settlement and erosion and surface water monitoring as required by the ADEC. Maintenance will include revegetation and regrading of the soil cap and maintaining drainage structures as needed in accordance with 18 AAC 60.490.

Closure/Reclamation Plan

The closure of the Site shall be in accordance with 18 AAC 60.490 and will consist of hauling treated soil to the Site, placing the treated soil to the lines and grades shown on the approved construction drawings (to be prepared), and constructing an engineered cap. The Site will be documented as a closed monofill by recording a notation on the deed to the property stating the land use, type of waste placed in the monofill, geographic boundaries, and details of the final cap.

Conceptually, the proposed cap will be comprised of a geomembrane barrier layer, a drainage layer (gravel or geosynthetic), and a vegetative soil cover. The final design of the engineered cap will be based on infiltration modeling that incorporates site-specific geologic and hydrologic data along with the chemical and physical properties of the treated soil. The final cap will be designed to encapsulate the treated soil and minimize infiltration of water through the cap and into the treated soil. The exposure of the treated soil placed in the monofill is expected to be short and occur during the transportation of the treated soil from the Wrangell Junkyard to the Site and during placement of the treated soil in the monofill. Treated soil will be covered during transportation and will be covered with plastic sheeting at the completion of each day of placement into the monofill to minimize infiltration of water. Local weather data indicates precipitation occurs year-round, but generally is greater from September to January. Construction and closure of the landfill should take place during months of lower precipitation to the extent possible to minimize the amount of water initially contained within the monofill.

The surface of the cap will be vegetated with native plants local to the area in order to control erosion and create a natural aesthetic look. Native plants will be limited to those plants with shallow root depth to mitigate damage to the geosynthetic components of the cover system.

Drainage features such as diversion berms, energy dissipation channels and vegetation will be incorporated into the monofill cap design. The top deck and side slopes will be graded to prevent ponding and drain water away from the monofill. The drainage structures will be designed for the 25-year, 24-hour storm event in accordance with 18 AAC 60.225 and constructed to divert stormwater from the monofill, minimize clogging, and minimize erosion of the cover soil component of the cap. Energy dissipation structures, such as rip rap or other similar stormwater best management practices (BMPs), near outlet structures will be incorporated, as necessary, to mitigate erosion.

During post-closure of the monofill, the Site will be visually inspected by the ADEC, or affiliated subcontractors, for at least 60 consecutive months following completion of closure in accordance

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with 18 AAC 60.490. Repair to the surface of the cap will be performed when inspections indicate settlement or erosion has created ponding on the top deck of the monofill.

CONCLUSION

Should you have any questions or comments related to this development plan or require additional information, please contact the undersigned at 1-858-716-2925.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Keaton Botelho', with a long horizontal flourish extending to the right.

Keaton Botelho, PE
Senior Engineer

Attachments: A: Sketches (Blue Line Drawings)
B: USGS Topographic Map (Petersburg B-1 Quadrangle)
C: MSDS Sheets

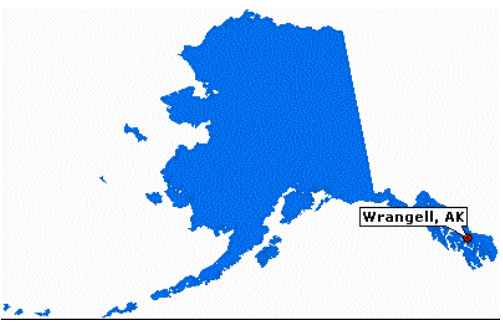
ATTACHMENT A

Sketches (Blue Line Drawings)

DRAFT - FOR INTERNAL DISCUSSION PURPOSES ONLY
NOT FOR CONSTRUCTION



VICINITY MAP



LOCATION MAP

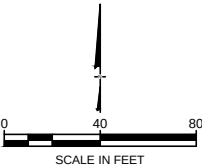


LEGEND

	EXISTING GROUND CONTOURS (50')
	PROPOSED GROUND CONTOURS
	APPROXIMATE GRADING LIMITS
	PROPOSED APPROXIMATE EXTENT OF SURVEY
	APPROXIMATE SITE BOUNDARY
	DRAINAGE DITCH

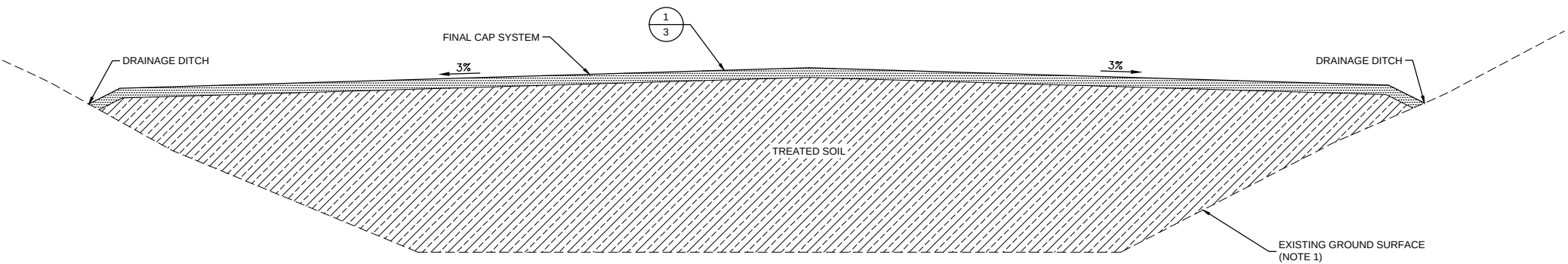
NOTES

1. TOPOGRAPHIC CONTOUR DATA BASED ON ASTER GDEM v.2 (NASA AND METI, 2011).
2. GDEM VERTICAL ACCURACY IS APPROXIMATELY 55 FEET.
3. BASIS FOR HORIZONTAL COORDINATES IS WGS84 UTM, ZONE 8 NORTH.
4. BASIS FOR VERTICAL COORDINATES IS EGM 96 GEOID.
5. 2010 AERIAL IMAGERY PROVIDED BY MICROSOFT BING MAPS.
6. MAXIMUM HEIGHT EXPECTED TO BE APPROXIMATELY 38 FEET ABOVE GRADE.
7. APPROXIMATE SITE LIMITS TO BE CONFIRMED WITH SITE SURVEY EXPECTED TO BE PERFORMED AT THE END OF OCTOBER.

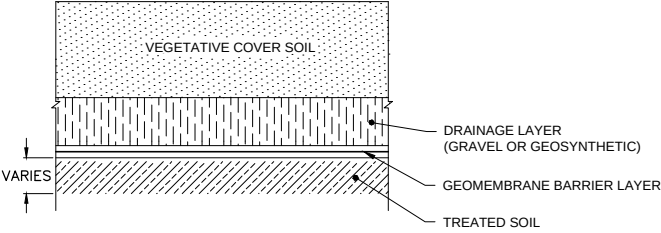


DATE PREPARED: 10-17-16	APPLICANTS NAME: ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION
PROPOSED TREATED SOIL REPOSITORY WRANGELL MONOFILL WRANGELL ISLAND, ALASKA	
SEC. (S): 4 TOWNSHIP 64S RANGE 84E MERIDIAN COPPER RIVER MERIDIAN	
PROJECT NO: PNG0736	OCTOBER 2016
FIGURE 1	

DRAFT - FOR INTERNAL DISCUSSION PURPOSES ONLY
NOT FOR CONSTRUCTION



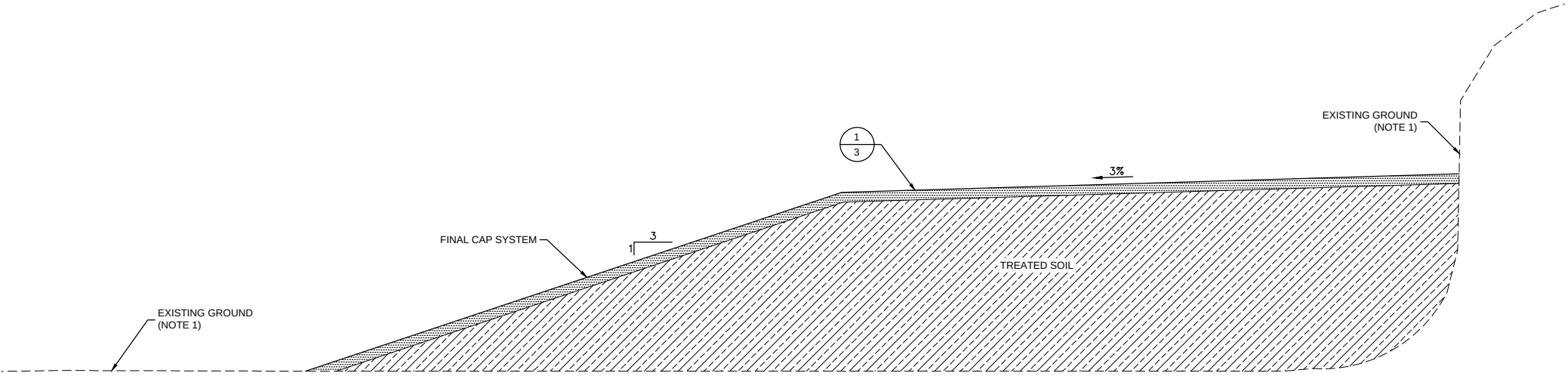
A
2 SECTION
MONOFILL - EAST/WEST
SCALE: N.T.S.



1
2 DETAIL
TYPICAL CAP SYSTEM
SCALE: N.T.S.

LEGEND	
---	EXISTING GROUND
[Stippled Box]	COVER SOIL
[Diagonal Hatched Box]	TREATED SOIL

- NOTES
- EXISTING GROUND SURFACE SHOWN FOR VISUALIZATION PURPOSES ONLY AND IS NOT REPRESENTATIVE OF SITE CONDITIONS.



B
2 SECTION
MONOFILL - NORTH/SOUTH
SCALE: N.T.S.

DATE PREPARED: 10-17-16	APPLICANTS NAME: ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION
PROPOSED TREATED SOIL REPOSITORY WRANGELL MONOFILL WRANGELL ISLAND, ALASKA	
SEC. (S): 4 TOWNSHIP 64S RANGE 84E MERIDIAN COPPER RIVER MERIDIAN	
PROJECT NO: PNG0736	OCTOBER 2016

ATTACHMENT B

USGS Topographic Map (Petersburg B-1 Quadrangle)



1997

ATTACHMENT C

MSDS Sheets

Safety Data Sheet



SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

Diesel Fuel No. 1

Product Use: Fuel

Product Number(s): 203409990, 203414990, 203421990, 203422990, 203425, 270093, 270193, 270293, 271005, 271493, 271593, 271693, 272133, 272134

Synonyms: Calco Conv Dyed DF 1, CALCO LS Diesel 1, Calco ULS Conv DF 1, CHEVRON HS Heating Fuel 1, CHEVRON LS Diesel 1, CHEVRON LS Heating Fuel 1, CHEVRON ULSD Diesel 1, CT ULS Conv DF 1, CT ULS Conv Dyed DF 1, ULS Conv DF 1

Company Identification

Chevron Products Company
6001 Bollinger Canyon Rd., T3325/B10
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

Product Information: (800) 582-3835
SDS Requests: (800) 414-6737

SPECIAL NOTES: This MSDS covers all Chevron and Calco non-CARB Diesel No. 1 Fuels. The sulfur content is less than 0.5% (mass). (MSDS 7980)

SECTION 2 HAZARDS IDENTIFICATION

CLASSIFICATION: Flammable liquid: Category 3. Aspiration toxicant: Category 1. Skin irritation: Category 2. Target organ toxicant (central nervous system): Category 3. Target organ toxicant (respiratory irritant): Category 3. Acute aquatic toxicant: Category 2. Chronic aquatic toxicant: Category 2.



Signal Word: Danger

Physical Hazards: Flammable liquid and vapor.

Health Hazards: May be fatal if swallowed and enters airways. Causes skin irritation. May cause respiratory irritation. May cause drowsiness or dizziness.

Environmental Hazards: Toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS:

General: Keep out of reach of children. Read label before use.

Prevention: Keep away from heat/sparks/open flames/hot surfaces. -- No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use explosion-proof electrical/ventilating/lighting/equipment. Avoid breathing dust/fume/gas/mist/vapours/spray. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection. Wash thoroughly after handling. Avoid release to the environment.

Response: IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. IF ON SKIN (or hair): Take off immediately all contaminated clothing and wash it before reuse. Rinse skin with water/shower. IF SWALLOWED: Immediately call a poison center or doctor/physician. Do NOT induce vomiting. Call a poison center or doctor/physician if you feel unwell. In case of fire: Use media specified in the SDS to extinguish. Specific treatment (see Notes to Physician on this label). Collect spillage.

Storage: Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.

Disposal: Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

HAZARDS NOT OTHERWISE CLASSIFIED: Not Applicable

SECTION 3 COMPOSITION/ INFORMATION ON INGREDIENTS

COMPONENTS	CAS NUMBER	AMOUNT
Gas oils	68334-30-5	100 %wt/wt
Kerosine	8008-20-6	0 - 99 %wt/wt
Kerosine, hydrodesulfurized	64742-81-0	0 - 99 %wt/wt

Distillates, hydrodesulfurized, middle	64742-80-9	0 - 99 %wt/wt
Distillates, straight run middle (gas oil, light)	64741-44-2	0 - 99 %wt/wt
Naphthalene	91-20-3	0.02 - 0.2 %wt/wt
Total sulfur	Other	0 - 0.04 %wt/wt

SECTION 4 FIRST AID MEASURES

Description of first aid measures

Eye: No specific first aid measures are required. As a precaution, remove contact lenses, if worn, and flush eyes with water.

Skin: Wash skin with water immediately and remove contaminated clothing and shoes. Get medical attention if any symptoms develop. To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse.

Ingestion: If swallowed, get immediate medical attention. Do not induce vomiting. Never give anything by mouth to an unconscious person.

Inhalation: Move the exposed person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if breathing difficulties continue or if any other symptoms develop.

Most important symptoms and effects, both acute and delayed

IMMEDIATE HEALTH EFFECTS

Eye: Not expected to cause prolonged or significant eye irritation.

Skin: Contact with the skin causes irritation. Contains a material that causes defatting of the skin. Contact with the skin is not expected to cause an allergic skin response. Symptoms may include pain, itching, discoloration, swelling, and blistering.

Ingestion: Highly toxic; may be fatal if swallowed. Because of its low viscosity, this material can directly enter the lungs, if swallowed, or if subsequently vomited. Once in the lungs it is very difficult to remove and can cause severe injury or death. May be irritating to mouth, throat, and stomach. Symptoms may include pain, nausea, vomiting, and diarrhea.

Inhalation: The vapor or fumes from this material may cause respiratory irritation. Symptoms of respiratory irritation may include coughing and difficulty breathing. Excessive or prolonged breathing of this material may cause central nervous system effects. Central nervous system effects may include headache, dizziness, nausea, vomiting, weakness, loss of coordination, blurred vision, drowsiness, confusion, or disorientation. At extreme exposures, central nervous system effects may include respiratory depression, tremors or convulsions, loss of consciousness, coma or death.

DELAYED OR OTHER HEALTH EFFECTS:

Cancer: Whole diesel engine exhaust has been classified as a Group 2A carcinogen (probably carcinogenic to humans) by the International Agency for Research on Cancer (IARC). Contains naphthalene, which has been classified as a Group 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC). Risk depends on duration and level of exposure. See Section 11 for additional information.

Indication of any immediate medical attention and special treatment needed

Note to Physicians: Ingestion of this product or subsequent vomiting may result in aspiration of light hydrocarbon liquid, which may cause pneumonitis.

SECTION 5 FIRE FIGHTING MEASURES

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

Unusual Fire Hazards: See Section 7 for proper handling and storage.

PROTECTION OF FIRE FIGHTERS:

Fire Fighting Instructions: 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.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Protective Measures: Eliminate all sources of ignition in the vicinity of the spill or released vapor. If this material is released into the work area, evacuate the area immediately. Monitor area with combustible gas indicator.

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. All equipment used when handling the product must be grounded. A vapor suppressing foam may be used to reduce vapors. Use clean non-sparking tools to collect absorbed material. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.

Reporting: Report spills to local authorities and/or the U.S. Coast Guard's National Response Center at (800) 424-8802 as appropriate or required.

SECTION 7 HANDLING AND STORAGE

General Handling Information: Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.

Precautionary Measures: Liquid evaporates and forms vapor (fumes) which can catch fire and burn with explosive force. Invisible vapor spreads easily and can be set on fire by many sources such as pilot lights, welding equipment, and electrical motors and switches. Fire hazard is greater as liquid temperature rises above 29C (85F).

Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Do not breathe vapor or fumes. Wash thoroughly after handling. Keep out of the reach of children.

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.

Container Warnings: Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

General Storage Information: DO NOT USE OR STORE near heat, sparks, flames, or hot surfaces . USE AND STORE ONLY IN WELL VENTILATED AREA. Keep container closed when not in use.

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 process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below the recommended exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

Eye/Face Protection: No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields as a good safety practice.

Skin Protection: Wear protective clothing to prevent skin contact. Selection of protective clothing may include gloves, apron, boots, and complete facial protection depending on operations conducted.

Suggested materials for protective gloves include: Nitrile Rubber, Polyurethane, Polyvinyl Alcohol (PVA) (Note: Avoid contact with water. PVA deteriorates in water.), Viton.

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 Organic Vapors.

When used as a fuel, this material can produce carbon monoxide in the exhaust. Determine if airborne concentrations are below the occupational exposure limit for carbon monoxide. If not, wear an approved positive-pressure air-supplying respirator.

Use a positive pressure air-supplying respirator in circumstances where air-purifying respirators may not provide adequate protection.

Occupational Exposure Limits:

Component	Agency	TWA	STEL	Ceiling	Notation
Gas oils	ACGIH	100 mg/m3	--	--	Skin A3 total hydrocarbon
Gas oils	CVX	--	1000 mg/m3	--	--
Kerosine	ACGIH	200 mg/m3	--	--	Skin A3 Total hydrocarbon vapor
Kerosine	CVX	--	1000 mg/m3	--	--
Kerosine, hydrodesulfurized	ACGIH	200 mg/m3	--	--	Skin A3 Total hydrocarbon vapor
Kerosine, hydrodesulfurized	CVX	--	1000 mg/m3	--	--
Distillates, hydrodesulfurized, middle	Not Applicable	--	--	--	--
Distillates, straight run middle (gas oil, light)	Not Applicable	--	--	--	--
Naphthalene	ACGIH	10 ppm (weight)	15 ppm (weight)	--	Skin
Naphthalene	OSHA Z-1	50 mg/m3	--	--	--
Total sulfur	Not Applicable	--	--	--	--

Consult local authorities for appropriate values.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

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

Color: Varies depending on specification

Physical State: Liquid

Odor: Hydrocarbon odor

Odor Threshold: No data available

pH: Not Applicable

Vapor Pressure: 0.40 kPa @ 40 °C (104 °F)

Vapor Density (Air = 1): >1

Initial Boiling Point: 204°C (399.2°F) - 300°C (572°F)

Solubility: Soluble in hydrocarbon solvents; insoluble in water.

Freezing Point: Not Applicable

Melting Point: No data available

Specific Gravity: 0.85 @ 15.6°C (60.1°F) (Typical)

Density: No data available
Viscosity: 1.30 - 2.40 cSt @ 40°C (104°F)
Evaporation Rate: No data available
Decomposition temperature: No data available
Octanol/Water Partition Coefficient: No data available

FLAMMABLE PROPERTIES:

Flammability (solid, gas): No Data Available

Flashpoint: 38 °C (100 °F)

Autoignition: 210 °C (410 °F)

Flammability (Explosive) Limits (% by volume in air): Lower: 0.6 Upper: 4.7

SECTION 10 STABILITY AND REACTIVITY

Reactivity: May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

Chemical Stability: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

Incompatibility With Other Materials: Not applicable

Hazardous Decomposition Products: None known (None expected)

Hazardous Polymerization: Hazardous polymerization will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

Serious Eye Damage/Irritation: The eye irritation hazard is based on evaluation of data for product components.

Skin Corrosion/Irritation:

Skin Sensitization: This material did not cause skin sensitization reactions in a Buehler guinea pig test.

Acute Dermal Toxicity: ERROR: Symbol QUALFIER_DESC is an unknown variable name. The acute dermal toxicity is based on data for a similar material.

Acute Oral Toxicity: The acute oral toxicity is based on data for a similar material.

Acute Inhalation Toxicity: The acute respiratory toxicity is based on data for a similar material.

Acute Toxicity Estimate: Not Determined

Germ Cell Mutagenicity: The hazard evaluation is based on data for components or a similar material.

Carcinogenicity: Refer to ADDITIONAL TOXICOLOGY INFORMATION below. Whole diesel engine exhaust has been classified as a Group 2A carcinogen (probably carcinogenic to humans) by the International Agency for Research on Cancer (IARC). Contains naphthalene, which has been classified as

a Group 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC).

Reproductive Toxicity: The hazard evaluation is based on data for components or a similar material.

Specific Target Organ Toxicity - Single Exposure: The hazard evaluation is based on data for components or a similar material.

Specific Target Organ Toxicity - Repeated Exposure: The hazard evaluation is based on data for components or a similar material.

ADDITIONAL TOXICOLOGY INFORMATION:

The National Institute of Occupational Safety and Health (NIOSH) has recommended that whole diesel exhaust be regarded as potentially causing cancer. This recommendation was based on test results showing increased lung cancer in laboratory animals exposed to whole diesel exhaust.

This product contains kerosene. CONCAWE (product dossier 94/106) has summarized current health, safety and environmental data available for a number of kerosenes (typically straight-run kerosene, CAS 8008-20-6, or hydrodesulfurized kerosene, CAS 64742-81-0). ACUTE/SUBCHRONIC: Following acute exposure to kerosene, signs observed in rats and rabbits were of a low order of toxicity: central nervous system depression occurred following oral exposure, skin irritation (ranging from slight to severe irritation) occurred with dermal exposure, and respiratory tract irritation occurred with inhalation exposure. None of the kerosenes tested produced more than slight eye irritation and none were skin sensitizers. However, intratracheal administration or artificial aspiration of small volumes (0.1 to 0.2 ml) of kerosene into the lungs of rats, chickens and primates resulted in lung damage and/or death. In a study in which rats, mice, rabbits and cats were exposed to kerosene aerosol concentrations in the range 0.05 to 120 mg/l for up to four weeks, reductions in respiratory rate, pulmonary hyperaemia, leucocytosis, monocytosis and decreased erythrocyte sedimentation rate were observed, and histological examination revealed inflammatory changes in the respiratory tract (tracheitis, bronchitis and pneumonia).

CANCER: Chronic (3 to 24 months) mouse dermal toxicity studies of kerosenes and jet fuels produced mild to moderate skin irritation, while long-term (2+ years) studies showed moderate to severe skin damage as well as an increased incidence of tumors after long latency periods (probably due to a secondary mechanism related to skin irritancy). DEVELOPMENTAL/REPRODUCTION: Hydrodesulfurized kerosene was tested by the Petroleum Product Stewardship Council in a OECD Guideline 421 Reproductive/Developmental Toxicity Study. The kerosene sample was diluted to 494 (60%), 330 (40%), and 165 (20%) mg/kg/day in food grade mineral oil and applied daily during pre-mating and mating to day 19 of gestation. There was no apparent maternal, reproductive, or developmental toxicity at any dose. Males treated for eight weeks had increased relative kidney weights in the high dose group but no microscopic changes in testes or epididymides. No gross anomalies were observed in the pups.

This product contains naphthalene.

GENERAL TOXICITY: Exposure to naphthalene has been reported to cause methemoglobinemia and/or hemolytic anemia, especially in humans deficient in the enzyme glucose-6-phosphate dehydrogenase. Laboratory animals given repeated oral doses of naphthalene have developed cataracts.

REPRODUCTIVE TOXICITY AND BIRTH DEFECTS: Naphthalene did not cause birth defects when

administered orally to rabbits, rats, and mice during pregnancy, but slightly reduced litter size in mice at dose levels that were lethal to the pregnant females. Naphthalene has been reported to cross the human placenta. GENETIC TOXICITY: Naphthalene caused chromosome aberrations and sister chromatid exchanges in Chinese hamster ovary cells, but was not a mutagen in several other in-vitro tests. CARCINOGENICITY: In a study conducted by the National Toxicology Program (NTP), mice exposed to 10 or 30 ppm of naphthalene by inhalation daily for two years had chronic inflammation of the nose and lungs and increased incidences of metaplasia in those tissues. The incidence of benign lung tumors (alveolar/bronchiolar adenomas) was significantly increased in the high-dose female group but not in the male groups. In another two-year inhalation study conducted by NTP, exposure of rats to 10, 30, and 60 ppm naphthalene caused increases in the incidences of a variety of nonneoplastic lesions in the nose. Increases in nasal tumors were seen in both sexes, including olfactory neuroblastomas in females at 60 ppm and adenomas of the respiratory epithelium in males at all exposure levels. The relevance of these effects to humans has not been established. No carcinogenic effect was reported in a 2-year feeding study in rats receiving naphthalene at 41 mg/kg/day.

This product contains gas oils.

CONCAWE (product dossier 95/107) has summarized current health, safety and environmental data available for a number of gas oils, typically hydrodesulfurized middle distillates, CAS 64742-80-9, straight-run middle distillates, CAS 64741-44-2, and/or light cat-cracked distillate CAS 64741-59-9. CARCINOGENICITY: All materials tested have caused the development of skin tumors in mice, but all featured severe skin irritation and sometimes a long latency period before tumors developed. Straight-run and cracked gas oil samples were studied to determine the influence of dermal irritation on the carcinogenic activity of middle distillates. At non-irritant doses the straight-run gas oil was not carcinogenic, but at irritant doses, weak activity was demonstrated. Cracked gas oils, when diluted with mineral oil, demonstrated carcinogenic activity irrespective of the occurrence of skin irritation. Gas oils were tested on male mice to study tumor initiating/promoting activity. The results demonstrated that while a straight-run gas oil sample was neither an initiator or promotor, a blend of straight-run and FCC stock was both a tumor initiator and a promotor.

GENOTOXICITY: Hydrotreated & hydrodesulfurized gas oils range in activity from inactive to weakly positive in in-vitro bacterial mutagenicity assays. Mouse lymphoma assays on straight-run gas oils without subsequent hydrodesulphurization gave positive results in the presence of S9 metabolic activation. In-vivo bone marrow cytogenetics and sister chromatic exchange assay exhibited no activity for straight-run components with or without hydrodesulphurization. Thermally or catalytically cracked gas oils tested with in-vitro bacterial mutagenicity assays in the presence of S9 metabolic activation were shown to be mutagenic. In-vitro sister chromatic exchange assays on cracked gas oil gave equivocal results both with and without S9 metabolic activation. In-vivo bone marrow cytogenetics assay was inactive for two cracked gas oil samples. Three hydrocracked gas oils were tested with in-vitro bacterial mutagenicity assays with S9, and one of the three gave positive results. Twelve distillate fuel samples were tested with in-vitro bacterial mutagenicity assays & with S9 metabolic activation and showed negative to weakly positive results. In one series, activity was shown to be related to the PCA content of samples tested. Two in-vivo studies were also conducted. A mouse dominant lethal assay was negative for a sample of diesel fuel. In the other study, 9 samples of No 2 heating oil containing 50% cracked stocks caused a slight increase in the number of chromosomal aberrations in bone marrow cytogenetics assays. DEVELOPMENTAL TOXICITY: Diesel fuel vapor did not cause fetotoxic or teratogenic effects when pregnant rats were exposed on days 6-15 of pregnancy. Gas oils were applied to the skin of pregnant rats daily on days 0-19

of gestation. All but one (coker light gas oil) caused fetotoxicity (increased resorptions, reduced litter weight, reduced litter size) at dose levels that were also maternally toxic.

SECTION 12 ECOLOGICAL INFORMATION

ECOTOXICITY

This material is expected to be toxic to aquatic organisms and may cause long-term adverse effects in the aquatic environment. A series of studies on the acute toxicity of 4 diesel fuel samples were conducted by one laboratory using water accommodated fractions. The range of effective (EC50) or lethal concentrations (LC50) expressed as loading rates were:

48 hour(s) LC50: 20 - 210 mg/l (Daphnia magna)
96 hour(s) LC50: 21 - 210 mg/l (Salmo gairdneri)
72 hour(s) EC50: 2.6 - 25 mg/l (Selenastrum capricornutum)

MOBILITY

No data available.

PERSISTENCE AND DEGRADABILITY

This material is not expected to be readily biodegradable. On release to the environment the lighter components of diesel fuel will generally evaporate but depending on local environmental conditions (temperature, wind, mixing or wave action, soil type, etc.) the remainder may become dispersed in the water column or absorbed to soil or sediment. Diesel fuel would not be expected to be readily biodegradable. In a modified Strum test (OECD method 301B) approximately 40% biodegradation was recorded over 28 days. However, it has been shown that most hydrocarbon components of diesel fuel are degraded in soil in the presence of oxygen. Under anaerobic conditions, such as in anoxic sediments, rates of biodegradation are negligible. The biodegradability of this material is based on an evaluation of data for the components or a similar material.

The product has not been tested. The statement has been derived from products of a similar structure and composition.

POTENTIAL TO BIOACCUMULATE

Bioconcentration Factor: No data available.

Octanol/Water Partition Coefficient: No data available

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 international, country, or local laws and regulations.

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.

DOT Shipping Description: UN1202, GAS OIL, 3, III OR UN1223, KEROSENE, 3, III ; OPTIONAL DISCLOSURES AS COMBUSTIBLE LIQUID PER 49 CFR 173.150 (F) OR AS A MARINE POLLUTANT (PETROLEUM DISTILLATES, KEROSENE, GAS OIL)

IMO/IMDG Shipping Description: UN1268, PETROLEUM DISTILLATES, N.O.S. (KEROSENE, GASOIL), 3, III, FLASH POINT SEE SECTION 5 OR 9, MARINE POLLUTANT (KEROSENE, GASOIL)

ICAO/IATA Shipping Description: UN1202, GAS OIL, 3, III; OR UN1223, KEROSENE, 3, III; OR UN1268, PETROLEUM DISTILLATES, N.O.S., 3, III

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code:
Not applicable

SECTION 15 REGULATORY INFORMATION

EPCRA 311/312 CATEGORIES:	1. Immediate (Acute) Health Effects:	YES
	2. Delayed (Chronic) Health Effects:	NO
	3. Fire Hazard:	YES
	4. Sudden Release of Pressure Hazard:	NO
	5. Reactivity Hazard:	NO

REGULATORY LISTS SEARCHED:

01-1=IARC Group 1	03=EPCRA 313
01-2A=IARC Group 2A	04=CA Proposition 65
01-2B=IARC Group 2B	05=MA RTK
02=NTP Carcinogen	06=NJ RTK
	07=PA RTK

The following components of this material are found on the regulatory lists indicated.

Kerosine, hydrodesulfurized	05, 06, 07
Gas oils	07
Kerosine	05, 06, 07
Distillates, straight run middle (gas oil, light)	06
Naphthalene	01-2B, 02, 03, 04, 05, 06, 07

CERCLA REPORTABLE QUANTITIES(RQ)/EPCRA 302 THRESHOLD PLANNING QUANTITIES(TPQ):

Component	Component RQ	Component TPQ	Product RQ
Naphthalene	100 lbs	None	55556 lbs

CHEMICAL INVENTORIES:

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

NEW JERSEY RTK CLASSIFICATION:

Under the New Jersey Right-to-Know Act L. 1983 Chapter 315 N.J.S.A. 34:5A-1 et. seq., the product is to be identified as follows: DIESEL FUEL

SECTION 16 OTHER INFORMATION

NFPA RATINGS: Health: 1 Flammability: 2 Reactivity: 0

HMIS RATINGS: Health: 2 Flammability: 2 Reactivity: 0

(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, *- Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

REVISION STATEMENT: This revision updates the following sections of this Safety Data Sheet: 1,16

Revision Date: DECEMBER 02, 2015

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
GHS - Globally Harmonized System	CAS - Chemical Abstract Service Number
ACGIH - American Conference of Governmental Industrial Hygienists	IMO/IMDG - International Maritime Dangerous Goods Code
API - American Petroleum Institute	SDS - Safety Data Sheet
HMIS - Hazardous Materials Information System	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
NCEL - New Chemical Exposure Limit	EPA - Environmental Protection Agency
SCBA - Self-Contained Breathing Apparatus	

Prepared according to the 29 CFR 1910.1200 (2012) by Chevron Energy Technology Company, 6001

Bollinger Canyon Road San Ramon, CA 94583.

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.

Safety Data Sheet



SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

DIESEL FUEL No. 2

Product Use: Fuel [See Section 16 for Additional Product Numbers]

Synonyms: 15 S Diesel Fuel 2, Alternative Low Aromatic Diesel (ALAD), Calco LS Diesel 2, CALCO ULS C-B0-B5 DF2, CALCO ULS C-B0-B5 DF2 DYED, CALCO ULS C-B2 DF2, CALCO ULS C-B2 DF2 DYED, CALCO ULS C-B5 DF2, CALCO ULS C-B5 DF2 DYED, Calco ULS DF2, Calco ULS Diesel 2, CALCO ULS S-B0-B5 DF2 DYED, Calco ULS S-B5 DF2, Calco ULS S-B5 DF2 DYED, CALCO ULS TC-B1 DF2, CALCO ULS TC-B1 DF2 DYED, CALCO ULS TC-B2 DF2, CALCO ULS TC-B2 DF2 DYED, CALCO ULS TC-B3 DF2, CALCO ULS TC-B3 DF2 DYED, CALCO ULS TC-B4 DF2, CALCO ULS TC-B4 DF2 DYED, CALCO ULS TC-B5 DF2, CALCO ULS TC-B5 DF2 DYED, CALCO ULS TX-B1 DF2, CALCO ULS TX-B1 DF2 DYED, CALCO ULS TX-B2 DF2, CALCO ULS TX-B2 DF2 DYED, CALCO ULS TX-B3 DF2, CALCO ULS TX-B3 DF2 DYED, CALCO ULS TX-B4 DF2, CALCO ULS TX-B4 DF2 DYED, CALCO ULS TX-B5 DF2, CALCO ULS TX-B5 DF2 DYED, Chevron LS Diesel 2, Chevron ULS Diesel 2, CT ULS C-B0-B5 DF2, CT ULS C-B0-B5 DF2 DYED, CT ULS C-B2 DF2, CT ULS C-B5 DF2, CT ULS S-B0-B5 DF2 DYED, CT ULS S-B5 DF2, CT ULS S-B5 DF2 DYED, CT ULS S-B0-B5 DF2, CT ULS SPECIAL DF2 DYED, CT ULS TC-B1 DF2, CT ULS TC-B2 DF2, CT ULS TC-B3 DF2, CT ULS TC-B4 DF2, CT ULS TC-B5 DF2, CT ULS TX-B1 DF2, CT ULS TX-B2 DF2, CT ULS TX-B3 DF2, CT ULS TX-B4 DF2, CT ULS TX-B5 DF2, Diesel Fuel Oil, Diesel Grade No. 2, Diesel No. 2-D S15, Diesel No. 2-D S500, Diesel No. 2-D S5000, Distillates, straight run, Gas Oil, HS Diesel 2, HS Heating Fuel 2, Light Diesel Oil Grade No. 2-D, LS Diesel 2, LS Heating Fuel 2, Marine Diesel, RR Diesel Fuel, Texaco Diesel, Texaco Diesel No. 2, ULS C-B0-B5 DF2, ULS C-B0-B5 DF2 DYED, ULS C-B2 DF2, ULS C-B2 DF2 DYED, ULS C-B5 DF2, ULS C-B5 DF2 DYED, ULS S-B0-B5 DF2 DYED, ULS S-B5 DF2, ULS S-B0-B5 DF2, ULS TC-B1 DF2, ULS TC-B1 DF2 DYED, ULS TC-B2 DF2, ULS TC-B2 DF2 DYED, ULS TC-B3 DF2, ULS TC-B3 DF2 DYED, ULS TC-B4 DF2, ULS TC-B4 DF2 DYED, ULS TC-B5 DF2, ULS TC-B5 DF2 DYED, ULS TX-B1 DF2, ULS TX-B1 DF2 DYED, ULS TX-B3 DF2, ULS TX-B3 DF2 DYED, ULS TX-B4 DF2, ULS TX-B4 DF2 DYED, ULS TX-B5 DF2, ULS TX-B5 DF2 DYED, Ultra Low Sulfur Diesel 2

Company Identification

Chevron Products Company
6001 Bollinger Canyon Rd.
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

Product Information: (800) 582-3835

SDS Requests: lubemsds@chevron.com

SPECIAL NOTES: This SDS covers all Chevron, Texaco and Calco CARB & non-CARB Diesel No. 2 Fuels. The sulfur content is less than 0.5% (mass). Red dye is added to non-taxable fuel. (SDS 6894)

SPECIAL NOTES: This SDS covers all Chevron and Calco CARB Low Sulfur Diesel No. 2 Fuels. Red dye is added to non-taxable fuel. (SDS 7098)

SECTION 2 HAZARDS IDENTIFICATION

CLASSIFICATION: Flammable liquid: Category 3. Aspiration toxicant: Category 1. Carcinogen: Category 1B. Skin irritation: Category 2. Target organ toxicant (repeated exposure): Category 2. Target organ toxicant (central nervous system): Category 3. Acute inhalation toxicant: Category 4. Acute aquatic toxicant: Category 2. Chronic aquatic toxicant: Category 2.



Signal Word: Danger

Physical Hazards: Flammable liquid and vapor.

Health Hazards: May be fatal if swallowed and enters airways. May cause cancer. Causes skin irritation. Harmful if inhaled. May cause drowsiness or dizziness.

Target Organs: May cause damage to organs (Blood/Blood Forming Organs, Liver, Thymus) through prolonged or repeated exposure.

Environmental Hazards: Toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS:

General: Keep out of reach of children. Read label before use.

Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. -- No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use explosion-proof electrical/ventilating/lighting/equipment. Do not breathe dust/fume/gas/mist/vapours/spray. Use only

outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection. Use personal protective equipment as required. Wash thoroughly after handling. Avoid release to the environment.

Response: IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF ON SKIN (or hair): Take off immediately all contaminated clothing and wash it before reuse. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse. IF SWALLOWED: Immediately call a poison center or doctor/physician. Do NOT induce vomiting. Call a poison center or doctor/physician if you feel unwell. In case of fire: Use media specified in the SDS to extinguish. Specific treatment (see Notes to Physician on this label). Collect spillage.

Storage: Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.

Disposal: Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

HAZARDS NOT OTHERWISE CLASSIFIED: Not Applicable

SECTION 3 COMPOSITION/ INFORMATION ON INGREDIENTS

COMPONENTS	CAS NUMBER	AMOUNT
Diesel Fuel No. 2	68476-34-6	95 - 100 %vol/vol
Renewable Diesel	Mixture	0 - 20 %vol/vol
Fatty Acid Methyl Esters (FAME)	Mixture	0 - 5 %vol/vol
Naphthalene	91-20-3	0.02 - 0.2 %vol/vol
Total sulfur	Mixture	0 - 5000 ppm (weight)

SECTION 4 FIRST AID MEASURES

Description of first aid measures

Eye: No specific first aid measures are required. As a precaution, remove contact lenses, if worn, and flush eyes with water.

Skin: Wash skin with water immediately and remove contaminated clothing and shoes. Get medical attention if any symptoms develop. To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse.

Ingestion: If swallowed, get immediate medical attention. Do not induce vomiting. Never give anything by mouth to an unconscious person.

Inhalation: Move the exposed person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if breathing difficulties continue or if any other symptoms develop.

Most important symptoms and effects, both acute and delayed

IMMEDIATE HEALTH EFFECTS

Eye: Not expected to cause prolonged or significant eye irritation.

Skin: Contact with the skin causes irritation. Symptoms may include pain, itching, discoloration, swelling, and blistering. Contact with the skin is not expected to cause an allergic skin response.

Ingestion: Highly toxic; may be fatal if swallowed. Because of its low viscosity, this material can directly enter the lungs, if swallowed, or if subsequently vomited. Once in the lungs it is very difficult to remove and can cause severe injury or death. May be irritating to mouth, throat, and stomach. Symptoms may include pain, nausea, vomiting, and diarrhea.

Inhalation: The vapor or fumes from this material may cause respiratory irritation. Mists of this material may cause respiratory irritation. Symptoms of respiratory irritation may include coughing and difficulty breathing. Excessive or prolonged breathing of this material may cause central nervous system effects. Central nervous system effects may include headache, dizziness, nausea, vomiting, weakness, loss of coordination, blurred vision, drowsiness, confusion, or disorientation. At extreme exposures, central nervous system effects may include respiratory depression, tremors or convulsions, loss of consciousness, coma or death.

DELAYED OR OTHER HEALTH EFFECTS:

Cancer: Whole diesel engine exhaust has been classified as a Group 2A carcinogen (probably carcinogenic to humans) by the International Agency for Research on Cancer (IARC). Prolonged or repeated exposure to this material may cause cancer. Contains naphthalene, which has been classified as a Group 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC).

Target Organs: Contains material that may cause damage to the following organ(s) following repeated inhalation at concentrations above the recommended exposure limit based on animal data: Liver
Blood/Blood Forming Organs Thymus Risk depends on duration and level of exposure. See Section 11 for additional information.

Indication of any immediate medical attention and special treatment needed

Note to Physicians: Ingestion of this product or subsequent vomiting may result in aspiration of light hydrocarbon liquid, which may cause pneumonitis.

SECTION 5 FIRE FIGHTING MEASURES

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

Unusual Fire Hazards: See Section 7 for proper handling and storage.

PROTECTION OF FIRE FIGHTERS:

Fire Fighting Instructions: 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.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Protective Measures: Eliminate all sources of ignition in the vicinity of the spill or released vapor. If this material is released into the work area, evacuate the area immediately. Monitor area with combustible gas indicator.

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. All equipment used when handling the product must be grounded. A vapor suppressing foam may be used to reduce vapors. Use clean non-sparking tools to collect absorbed material. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.

Reporting: Report spills to local authorities and/or the U.S. Coast Guard's National Response Center at (800) 424-8802 as appropriate or required.

SECTION 7 HANDLING AND STORAGE

General Handling Information: Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.

Precautionary Measures: Liquid evaporates and forms vapor (fumes) which can catch fire and burn with explosive force. Invisible vapor spreads easily and can be set on fire by many sources such as pilot lights, welding equipment, and electrical motors and switches.

Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Do not breathe vapor or fumes. Do not breathe mist. Wash thoroughly after handling. Keep out of the reach of children.

Unusual Handling Hazards: WARNING! Do not use as portable heater or appliance fuel. Toxic fumes may accumulate and cause death. Slow heat generation may occur with oil-soaked rags, spent filter aids and spent absorbent material and may cause spontaneous combustion if stored near combustibles and not handled properly. Store biodiesel soaked rags, filter aids, and spill absorbent material in approved safety disposal containers and dispose of properly. Biodiesel soaked rags may be washed with soap and water and allowed to dry in well ventilated area.

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.

Container Warnings: Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

General Storage Information: DO NOT USE OR STORE near heat, sparks, flames, or hot surfaces. USE AND STORE ONLY IN WELL VENTILATED AREA. Keep container closed when not in use.

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 process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below the recommended exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

Eye/Face Protection: No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields as a good safety practice.

Skin Protection: Wear protective clothing to prevent skin contact. Selection of protective clothing may include gloves, apron, boots, and complete facial protection depending on operations conducted. Suggested materials for protective gloves include: Chlorinated Polyethylene (or Chlorosulfonated Polyethylene), Nitrile Rubber, Polyurethane, Viton.

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 Organic Vapors.

When used as a fuel, this material can produce carbon monoxide in the exhaust. Determine if airborne concentrations are below the occupational exposure limit for carbon monoxide. If not, wear an approved positive-pressure air-supplying respirator.

Use a positive pressure air-supplying respirator in circumstances where air-purifying respirators may not provide adequate protection.

Occupational Exposure Limits:

Component	Agency	TWA	STEL	Ceiling	Notation
Diesel Fuel No. 2	ACGIH	100 mg/m ³	--	--	Skin A3 total hydrocarbon
Diesel Fuel No. 2	CVX	100 mg/m ³	--	--	Skin total hydrocarbon
Renewable Diesel	Not Applicable	--	--	--	--
Fatty Acid Methyl Esters (FAME)	Not Applicable	--	--	--	--
Naphthalene	ACGIH	10 ppm (weight)	15 ppm	--	Skin A3

Naphthalene	OSHA Z-1	50 mg/m3	--	--	--
Total sulfur	Not Applicable	--	--	--	--

Consult local authorities for appropriate values.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

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

Color: Varies depending on specification

Physical State: Liquid

Odor: Petroleum odor

Odor Threshold: No data available

pH: Not Applicable

Vapor Pressure: 0.04 kPa (Approximate) @ 40 °C (104 °F)

Vapor Density (Air = 1): >1

Initial Boiling Point: 175.6°C (348.1°F) - 370°C (698°F)

Solubility: Soluble in hydrocarbons; insoluble in water

Freezing Point: Not Applicable

Melting Point: Not Applicable

Specific Gravity: 0.80 - 0.88 @ 15.6°C (60.1°F) (Typical)

Density: No data available

Viscosity: 1.90 cSt - 4.10 cSt @ 40°C (104°F)

Coefficient of Therm. Expansion / °F: No data available

Evaporation Rate: No data available

Decomposition temperature: No data available

Octanol/Water Partition Coefficient: No data available

FLAMMABLE PROPERTIES:

Flammability (solid, gas): No Data Available

Flashpoint: (Pensky-Martens Closed Cup) 52 °C (125 °F) Minimum

Autoignition: 257 °C (494 °F)

Flammability (Explosive) Limits (% by volume in air): Lower: 0.6 Upper: 4.7

SECTION 10 STABILITY AND REACTIVITY

Reactivity: May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

Chemical Stability: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

Conditions to Avoid: Avoid contact with heat, sparks, fire and oxidizing agents

Incompatibility With Other Materials: Not applicable

Hazardous Decomposition Products: None known (None expected)

Hazardous Polymerization: Hazardous polymerization will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

Serious Eye Damage/Irritation: The eye irritation hazard is based on evaluation of data for similar materials.

Skin Corrosion/Irritation: The skin irritation hazard is based on evaluation of data for similar materials.

Skin Sensitization: The skin sensitization hazard is based on evaluation of data for similar materials.

Acute Dermal Toxicity: The acute dermal toxicity hazard is based on evaluation of data for similar materials.

Acute Oral Toxicity: The acute oral toxicity hazard is based on evaluation of data for similar materials.

Acute Inhalation Toxicity: The acute inhalation toxicity hazard is based on evaluation of data for similar materials.

Acute Toxicity Estimate (inhalation): 1.2 mg/l

Germ Cell Mutagenicity: The hazard evaluation is based on data for components or a similar material.

Carcinogenicity: The hazard evaluation is based on data for components or a similar material. Whole diesel engine exhaust has been classified as a Group 2A carcinogen (probably carcinogenic to humans) by the International Agency for Research on Cancer (IARC). Contains naphthalene, which has been classified as a Group 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC).

Reproductive Toxicity: The hazard evaluation is based on data for components or a similar material.

Specific Target Organ Toxicity - Single Exposure: The hazard evaluation is based on data for components or a similar material.

Specific Target Organ Toxicity - Repeated Exposure: The hazard evaluation is based on data for components or a similar material.

ADDITIONAL TOXICOLOGY INFORMATION:

This product contains gas oils.

CONCAWE (product dossier 95/107) has summarized current health, safety and environmental data available for a number of gas oils, typically hydrodesulfurized middle distillates, CAS 64742-80-9, straight-run middle distillates, CAS 64741-44-2, and/or light cat-cracked distillate CAS 64741-59-9.

CARCINOGENICITY: All materials tested have caused the development of skin tumors in mice, but all featured severe skin irritation and sometimes a long latency period before tumors developed. Straight-run and cracked gas oil samples were studied to determine the influence of dermal irritation on the carcinogenic activity of middle distillates. At non-irritant doses the straight-run gas oil was not carcinogenic, but at irritant doses, weak activity was demonstrated. Cracked gas oils, when diluted with

mineral oil, demonstrated carcinogenic activity irrespective of the occurrence of skin irritation. Gas oils were tested on male mice to study tumor initiating/promoting activity. The results demonstrated that while a straight-run gas oil sample was neither an initiator or promotor, a blend of straight-run and FCC stock was both a tumor initiator and a promotor.

GENOTOXICITY: Hydrotreated & hydrodesulfurized gas oils range in activity from inactive to weakly positive in in-vitro bacterial mutagenicity assays. Mouse lymphoma assays on straight-run gas oils without subsequent hydrodesulphurization gave positive results in the presence of S9 metabolic activation. In-vivo bone marrow cytogenetics and sister chromatic exchange assay exhibited no activity for straight-run components with or without hydrodesulphurization. Thermally or catalytically cracked gas oils tested with in-vitro bacterial mutagenicity assays in the presence of S9 metabolic activation were shown to be mutagenic. In-vitro sister chromatic exchange assays on cracked gas oil gave equivocal results both with and without S9 metabolic activation. In-vivo bone marrow cytogenetics assay was inactive for two cracked gas oil samples. Three hydrocracked gas oils were tested with in-vitro bacterial mutagenicity assays with S9, and one of the three gave positive results. Twelve distillate fuel samples were tested with in-vitro bacterial mutagenicity assays & with S9 metabolic activation and showed negative to weakly positive results. In one series, activity was shown to be related to the PCA content of samples tested. Two in-vivo studies were also conducted. A mouse dominant lethal assay was negative for a sample of diesel fuel. In the other study, 9 samples of No 2 heating oil containing 50% cracked stocks caused a slight increase in the number of chromosomal aberrations in bone marrow cytogenetics assays. **DEVELOPMENTAL TOXICITY:** Diesel fuel vapor did not cause fetotoxic or teratogenic effects when pregnant rats were exposed on days 6-15 of pregnancy. Gas oils were applied to the skin of pregnant rats daily on days 0-19 of gestation. All but one (coker light gas oil) caused fetotoxicity (increased resorptions, reduced litter weight, reduced litter size) at dose levels that were also maternally toxic.

The National Institute of Occupational Safety and Health (NIOSH) has recommended that whole diesel exhaust be regarded as potentially causing cancer. This recommendation was based on test results showing increased lung cancer in laboratory animals exposed to whole diesel exhaust.

This product contains naphthalene.

GENERAL TOXICITY: Exposure to naphthalene has been reported to cause methemoglobinemia and/or hemolytic anemia, especially in humans deficient in the enzyme glucose-6-phosphate dehydrogenase. Laboratory animals given repeated oral doses of naphthalene have developed cataracts.

REPRODUCTIVE TOXICITY AND BIRTH DEFECTS: Naphthalene did not cause birth defects when administered orally to rabbits, rats, and mice during pregnancy, but slightly reduced litter size in mice at dose levels that were lethal to the pregnant females. Naphthalene has been reported to cross the human placenta. **GENETIC TOXICITY:** Naphthalene caused chromosome aberrations and sister chromatid exchanges in Chinese hamster ovary cells, but was not a mutagen in several other in-vitro tests. **CARCINOGENICITY:** In a study conducted by the National Toxicology Program (NTP), mice exposed to 10 or 30 ppm of naphthalene by inhalation daily for two years had chronic inflammation of the nose and lungs and increased incidences of metaplasia in those tissues. The incidence of benign lung tumors (alveolar/bronchiolar adenomas) was significantly increased in the high-dose female group but not in the male groups. In another two-year inhalation study conducted by NTP, exposure of rats to 10, 30, and 60 ppm naphthalene caused increases in the incidences of a variety of nonneoplastic lesions in the nose. Increases in nasal tumors were seen in both sexes, including olfactory neuroblastomas in females at 60 ppm and adenomas of the respiratory epithelium in males at all exposure levels. The relevance of these

effects to humans has not been established. No carcinogenic effect was reported in a 2-year feeding study in rats receiving naphthalene at 41 mg/kg/day.

SECTION 12 ECOLOGICAL INFORMATION

ECOTOXICITY

A series of studies on the acute toxicity of 4 diesel fuel samples were conducted by one laboratory using water accommodated fractions. The range of effective (EC50) or lethal concentrations (LC50) expressed as loading rates were: This material is expected to be toxic to aquatic organisms and may cause long-term adverse effects in the aquatic environment.

72 hour(s) EC50: 2.6-25 mg/l (Selenastrum capricornutum)

96 hour(s) LC50: 21-210 mg/l (Salmo gairdneri)

48 hour(s) EC50: 20-210 mg/l (Daphnia magna)

MOBILITY

No data available.

PERSISTENCE AND DEGRADABILITY

This material is not expected to be readily biodegradable. On release to the environment the lighter components of diesel fuel will generally evaporate but depending on local environmental conditions (temperature, wind, mixing or wave action, soil type, etc.) the remainder may become dispersed in the water column or absorbed to soil or sediment. Diesel fuel would not be expected to be readily biodegradable. In a modified Strum test (OECD method 301B) approximately 40% biodegradation was recorded over 28 days. However, it has been shown that most hydrocarbon components of diesel fuel are degraded in soil in the presence of oxygen. Under anaerobic conditions, such as in anoxic sediments, rates of biodegradation are negligible.

The product has not been tested. The statement has been derived from products of a similar structure and composition.

POTENTIAL TO BIOACCUMULATE

Bioconcentration Factor: No data available.

Octanol/Water Partition Coefficient: No data available

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 international, country, or local laws and regulations.

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.

DOT Shipping Description: For packages with an Initial Boiling Point > 35 deg C and a Flash Point (PM Closed Cup) >= 23 deg C but <= 60 deg C: UN1202, GAS OIL, 3, III; OPTIONAL DISCLOSURE: UN1202, GAS OIL, 3, III, MARINE POLLUTANT (DIESEL FUEL) Optional disclosure per 49 CFR when Flash Point (PM Closed Cup) >= 38 deg C < 93 deg C per 49 173.150 (f): UN1202, GAS OIL, COMBUSTIBLE LIQUID, III; NON-BULK PACKAGES ARE EXEMPTED FROM THE PROVISIONS OF 49 CFR IN USA JURISDICTIONS Optional disclosure as a GHS Environmental Hazard/Marine Pollutant when Flash Point (PM Closed Cup) > 60 deg C: UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(DIESEL FUEL), 9, III, MARINE POLLUTANT (DIESEL FUEL)

IMO/IMDG Shipping Description: For packages with an Initial Boiling Point > 35 deg C and a Flash Point (PM Closed Cup) >= 23 deg C, <= 60 deg C: UN1202, GAS OIL, 3, III, FLASH POINT SEE SECTION 5 OR 9, MARINE POLLUTANT (DIESEL FUEL); OPTIONAL DISCLOSURE: UN1268, PETROLEUM DISTILLATES, N.O.S. (DIESEL FUEL), 3, III, FLASH POINT SEE SECTION 5 OR 9, MARINE POLLUTANT (DIESEL FUEL) For packages with a Flash Point (PM Closed Cup) > 60 deg C: UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DIESEL FUEL), 9, III, MARINE POLLUTANT (DIESEL FUEL)

ICAO/IATA Shipping Description: For packages with an Initial Boiling Point > 35 deg C and a Flash Point (PM Closed Cup) >= 23 deg C, <= 60 deg C: UN1202, GAS OIL, 3, III For packages with a Flash Point (PM Closed Cup) > 60 deg C: UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DIESEL FUEL), 9, III, MARINE POLLUTANT (DIESEL FUEL)

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code:
Not applicable

SECTION 15 REGULATORY INFORMATION

EPCRA 311/312 CATEGORIES:	1. Immediate (Acute) Health Effects:	YES
	2. Delayed (Chronic) Health Effects:	YES
	3. Fire Hazard:	YES
	4. Sudden Release of Pressure Hazard:	NO
	5. Reactivity Hazard:	NO

REGULATORY LISTS SEARCHED:

01-1=IARC Group 1	03=EPCRA 313
01-2A=IARC Group 2A	04=CA Proposition 65
01-2B=IARC Group 2B	05=MA RTK
02=NTP Carcinogen	06=NJ RTK
	07=PA RTK

The following components of this material are found on the regulatory lists indicated.

Naphthalene	01-2B, 02, 04, 05, 06, 07
Diesel Fuel No. 2	07

CERCLA REPORTABLE QUANTITIES(RQ)/EPCRA 302 THRESHOLD PLANNING QUANTITIES(TPQ):

Component	Component RQ	Component TPQ	Product RQ
Naphthalene	100 lbs	None	40000 lbs

CHEMICAL INVENTORIES:

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

NEW JERSEY RTK CLASSIFICATION:

Under the New Jersey Right-to-Know Act L. 1983 Chapter 315 N.J.S.A. 34:5A-1 et. seq., the product is to be identified as follows: DIESEL FUEL

SECTION 16 OTHER INFORMATION

NFPA RATINGS: Health: 1 Flammability: 2 Reactivity: 0

HMIS RATINGS: Health: 2* Flammability: 2 Reactivity: 0
(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, *- Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

Additional Product Number(s): 203408, 203410, 203413, 203417, 203431, 203436, 203437, 203441, 203443, 203447, 203449, 203450, 220122, 225114, 225115, 225150, 266176, 270000, 270005, 270030, 270031, 270032, 270033, 270034, 270040, 270041, 270042, 270043, 270044, 270045, 270046, 270047, 270048, 270049, 270050, 270051, 270052, 270053, 270054, 270058, 270059, 270060, 270062, 270063, 270064, 270065, 270068, 270069, 270070, 270081, 270082, 270083, 270084, 270085, 270086, 270087, 270088, 270089, 270090, 270091, 270094, 270095, 270096, 270100, 270101, 270102, 270103, 270104, 270105, 270106, 270107, 270108, 270109, 270110, 270111, 270112, 270113, 270114, 270115, 270116, 270117, 270118, 270119, 270120, 270121, 270122, 270123, 270124, 271006, 272006, 272007, 272008, 272009, 272010, 272011, 272012, 272013, 272093, 272102, 272126, 272129, 272130, 272131, 272152, 272185, 272190, 272195, 272593, 272601, 272602, 272693, 272793, 273003, 273030, 273053, 275000
REVISION STATEMENT: This revision updates the following sections of this Safety Data Sheet: 3,8,15.

Revision Date: October 03, 2016

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
GHS - Globally Harmonized System	CAS - Chemical Abstract Service Number
ACGIH - American Conference of Governmental Industrial Hygienists	IMO/IMDG - International Maritime Dangerous Goods Code
API - American Petroleum Institute	SDS - Safety Data Sheet
HMIS - Hazardous Materials Information System	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
NCEL - New Chemical Exposure Limit	EPA - Environmental Protection Agency
SCBA - Self-Contained Breathing Apparatus	

Prepared according to the 29 CFR 1910.1200 (2012) by Chevron Energy Technology Company, 6001 Bollinger Canyon Road, San Ramon, CA 94583.

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.

Safety Data Sheet



SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

CHEVRON and TEXACO MID-GRADE UNLEADED GASOLINES

Product Use: Fuel

Product Number(s): 201001, 204041, 204044, 204063, 204096, 204278, 204312, 204313, 204753 [See Section 16 for Additional Product Numbers]

Synonyms: Calco Mid-Grade Unleaded Gasoline, Chevron Mid-Grade Unleaded Gasoline, Chevron Plus Unleaded Gasoline, Texaco Power Plus Gasoline

Company Identification

Chevron Products Company
6001 Bollinger Canyon Rd.
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

Product Information: (800) 582-3835
SDS Requests: lubemsds@chevron.com

SPECIAL NOTES: This MSDS applies to: all motor gasoline.

SECTION 2 HAZARDS IDENTIFICATION

CLASSIFICATION: Flammable liquid: Category 1. Aspiration toxicant: Category 1. Carcinogen: Category 1A. Target organ toxicant (repeated exposure): Category 1. Eye irritation: Category 2A. Germ Cell Mutagen: Category 1B. Skin irritation: Category 2. Reproductive toxicant (developmental): Category 2. Target organ toxicant (central nervous system): Category 3. Acute aquatic toxicant: Category 2. Chronic aquatic toxicant: Category 2.



Signal Word: Danger

Physical Hazards: Extremely flammable liquid and vapor.

Health Hazards: May be fatal if swallowed and enters airways. May cause genetic defects. May cause cancer. Causes skin irritation. Causes serious eye irritation. Suspected of damaging the unborn child. May cause drowsiness or dizziness.

Target Organs: Causes damage to organs (Blood/Blood Forming Organs) through prolonged or repeated exposure.

Environmental Hazards: Toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS:

General: Keep out of reach of children. Read label before use.

Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. -- No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use explosion-proof electrical/ventilating/lighting/equipment. Do not breathe dust/fume/gas/mist/vapours/spray. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection. Use personal protective equipment as required. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment.

Response: IF exposed or concerned: Get medical advice/attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a poison center or doctor/physician if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. IF ON SKIN (or hair): Take off immediately all contaminated clothing and wash it before reuse. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse. IF SWALLOWED: Immediately call a poison center or doctor/physician. Do NOT induce vomiting. In case of fire: Use media specified in the SDS to extinguish. Specific treatment (see Notes to Physician on this label). Collect spillage.

Storage: Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.

Disposal: Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

HAZARDS NOT OTHERWISE CLASSIFIED: Not Applicable

SECTION 3 COMPOSITION/ INFORMATION ON INGREDIENTS

COMPONENTS	CAS NUMBER	AMOUNT
Gasoline	86290-81-5	100 %vol/vol
Toluene (methylbenzene)	108-88-3	1 - 35 %vol/vol
Xylene (contains o-, m-, & p- xylene isomers in varying amounts)	1330-20-7	1 - 15 %vol/vol
Pentane, 2,2,4-trimethyl- (Isooctane)	540-84-1	1 - 13 %vol/vol
Butane	106-97-8	1 - 12 %vol/vol
Ethanol	64-17-5	0 - 10 %vol/vol
Benzene	71-43-2	0.1 - 4.9 %vol/vol
Hexane	110-54-3	1 - 5 %vol/vol
Heptane	142-82-5	1 - 4 %vol/vol
Ethyl benzene	100-41-4	0.1 - 3 %vol/vol
Cyclohexane	110-82-7	1 - 3 %vol/vol
Naphthalene	91-20-3	0.1 - 2 %vol/vol
Methylcyclohexane	108-87-2	1 - 2 %vol/vol

Motor gasoline is considered a mixture by EPA under the Toxic Substances Control Act (TSCA). The refinery streams used to blend motor gasoline are all on the TSCA Chemical Substances Inventory. The appropriate CAS number for refinery blended motor gasoline is 86290-81-5. The product specifications of motor gasoline sold in your area will depend on applicable Federal and State regulations.

SECTION 4 FIRST AID MEASURES

Description of first aid measures

Eye: Flush eyes with water immediately while holding the eyelids open. Remove contact lenses, if worn, after initial flushing, and continue flushing for at least 15 minutes. Get immediate medical attention.

Skin: Wash skin with water immediately and remove contaminated clothing and shoes. Get medical attention if any symptoms develop. To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse.

Ingestion: If swallowed, get immediate medical attention. Do not induce vomiting. Never give anything by mouth to an unconscious person.

Inhalation: Move the exposed person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if breathing difficulties continue or if any other symptoms develop.

Most important symptoms and effects, both acute and delayed

IMMEDIATE HEALTH EFFECTS

Eye: Contact with the eyes causes severe irritation. Symptoms may include pain, tearing, reddening, swelling and impaired vision.

Skin: Contact with the skin causes irritation. Skin contact may cause drying or defatting of the skin. Symptoms may include pain, itching, discoloration, swelling, and blistering. Contact with the skin is not expected to cause an allergic skin response.

Ingestion: Highly toxic; may be fatal if swallowed. Because of its low viscosity, this material can directly enter the lungs, if swallowed, or if subsequently vomited. Once in the lungs it is very difficult to remove and can cause severe injury or death. May be irritating to mouth, throat, and stomach. Symptoms may include pain, nausea, vomiting, and diarrhea.

Inhalation: Excessive or prolonged breathing of this material may cause central nervous system effects. Central nervous system effects may include headache, dizziness, nausea, vomiting, weakness, loss of coordination, blurred vision, drowsiness, confusion, or disorientation. At extreme exposures, central nervous system effects may include respiratory depression, tremors or convulsions, loss of consciousness, coma or death.

DELAYED OR OTHER HEALTH EFFECTS:

Reproduction and Birth Defects: Contains material that may cause harm to the unborn child if inhaled above the recommended exposure limit.

Cancer: Prolonged or repeated exposure to this material may cause cancer. Gasoline has been classified as a Group 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC).

Whole gasoline exhaust has been classified as a Group 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC).

Contains benzene, which has been classified as a carcinogen by the National Toxicology Program (NTP) and a Group 1 carcinogen (carcinogenic to humans) by the International Agency for Research on Cancer (IARC).

Contains naphthalene, which has been classified as a Group 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC). Contains ethylbenzene which has been classified as a Group 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC).

Genetic Toxicity: Contains material that may cause heritable genetic damage based on animal data.

Target Organs: Contains material that may cause damage to the following organ(s) following repeated inhalation at concentrations above the recommended exposure limit: Blood/Blood Forming Organs Risk depends on duration and level of exposure. See Section 11 for additional information.

Indication of any immediate medical attention and special treatment needed

Note to Physicians: Ingestion of this product or subsequent vomiting may result in aspiration of light hydrocarbon liquid, which may cause pneumonitis.

SECTION 5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Dry Chemical, CO₂, AFFF Foam or alcohol resistant foam.

Unusual Fire Hazards: See Section 7 for proper handling and storage.

PROTECTION OF FIRE FIGHTERS:

Fire Fighting Instructions: 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.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Protective Measures: Eliminate all sources of ignition in the vicinity of the spill or released vapor. If this material is released into the work area, evacuate the area immediately. Monitor area with combustible gas indicator.

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. All equipment used when handling the product must be grounded. A vapor suppressing foam may be used to reduce vapors. Use clean non-sparking tools to collect absorbed material. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.

Reporting: Report spills to local authorities and/or the U.S. Coast Guard's National Response Center at (800) 424-8802 as appropriate or required.

SECTION 7 HANDLING AND STORAGE

General Handling Information: Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.

Precautionary Measures: This product presents an extreme fire hazard. Liquid very quickly evaporates, even at low temperatures, and forms vapor (fumes) which can catch fire and burn with explosive violence. Invisible vapor spreads easily and can be set on fire by many sources such as pilot lights, welding equipment, and electrical motors and switches. Never siphon gasoline by mouth.

Do not store in open or unlabeled containers. READ AND OBSERVE ALL PRECAUTIONS ON PRODUCT LABEL. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Do not breathe vapor or fumes. Wash thoroughly after handling. Keep out of the reach of children.

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.

Container Warnings: Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

General Storage Information: DO NOT USE OR STORE near heat, sparks, flames, or hot surfaces . USE AND STORE ONLY IN WELL VENTILATED AREA. Keep container closed when not in use.

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 process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below the recommended exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

Eye/Face Protection: Wear protective equipment to prevent eye contact. Selection of protective equipment may include safety glasses, chemical goggles, face shields, or a combination depending on the work operations conducted.

Skin Protection: Wear protective clothing to prevent skin contact. Selection of protective clothing may include gloves, apron, boots, and complete facial protection depending on operations conducted.

Suggested materials for protective gloves include: Chlorinated Polyethylene (or Chlorosulfonated Polyethylene), Nitrile Rubber, Polyurethane, Viton.

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 Organic Vapors.

When used as a fuel, this material can produce carbon monoxide in the exhaust. Determine if airborne concentrations are below the occupational exposure limit for carbon monoxide. If not, wear an approved positive-pressure air-supplying respirator.

Use a positive pressure air-supplying respirator in circumstances where air-purifying respirators may not provide adequate protection.

Occupational Exposure Limits:

Component	Agency	TWA	STEL	Ceiling	Notation
Gasoline	ACGIH	300 ppm (weight)	500 ppm (weight)	--	A3
Toluene (methylbenzene)	ACGIH	20 ppm (weight)	--	--	--
Toluene (methylbenzene)	OSHA Z-2	200 ppm (weight)	--	300 ppm (weight)	--
Xylene (contains o-, m-, & p- xylene isomers in varying amounts)	ACGIH	100 ppm (weight)	150 ppm (weight)	--	--
Xylene (contains o-, m-, & p- xylene isomers in varying amounts)	OSHA Z-1	435 mg/m3	--	--	--
Pentane, 2,2,4-trimethyl- (Isooctane)	OSHA Z-1	2350 mg/m3	--	--	--
Pentane, 2,2,4-trimethyl- (Isooctane)	ACGIH	300 ppm (weight)	--	--	--
Butane	ACGIH	--	1000 ppm (weight)	--	--
Ethanol	ACGIH	1000 ppm (weight)	--	--	A4 A3
Ethanol	OSHA Z-1	1900 mg/m3	--	--	--
Benzene	ACGIH	.5 ppm (weight)	2.5 ppm (weight)	--	Skin A1 Skin
Benzene	OSHA SRS	1 ppm (weight)	5 ppm (weight)	--	--
Benzene	OSHA Z-2	10 ppm (weight)	--	25 ppm (weight)	--
Benzene	CVX	1 ppm (weight)	5 ppm (weight)	--	--
Hexane	ACGIH	50 ppm (weight)	--	--	Skin
Hexane	OSHA Z-1	1800 mg/m3	--	--	--
Heptane	ACGIH	400 ppm (weight)	500 ppm (weight)	--	--
Heptane	OSHA Z-1	2000 mg/m3	--	--	--
Ethyl benzene	ACGIH	20 ppm (weight)	--	--	A3
Ethyl benzene	OSHA Z-1	435 mg/m3	--	--	--
Cyclohexane	ACGIH	100 ppm (weight)	--	--	--
Cyclohexane	OSHA Z-1	1050 mg/m3	--	--	--

Naphthalene	ACGIH	10 ppm (weight)	15 ppm	--	Skin A3
Naphthalene	OSHA Z-1	50 mg/m3	--	--	--
Methylcyclohexane	ACGIH	400 ppm (weight)	--	--	--
Methylcyclohexane	OSHA Z-1	2000 mg/m3	--	--	--

Consult local authorities for appropriate values.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

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

Color: Colorless to yellow

Physical State: Liquid

Odor: Petroleum odor

Odor Threshold: No data available

pH: Not Applicable

Vapor Pressure: 5 psi - 15 psi (Typical) @ 37.8 °C (100 °F)

Vapor Density (Air = 1): 3 - 4 (Typical)

Initial Boiling Point: 27.2°C (81°F) - 204.4°C (400°F) (Typical)

Solubility: Insoluble in water; miscible with most organic solvents.

Freezing Point: Not Applicable

Melting Point: Not Applicable

Specific Gravity: 0.70 g/ml - 0.80 g/ml @ 15.6°C (60.1°F) (Typical)

Viscosity: <1 SUS @ 37.8°C (100°F)

Evaporation Rate: No data available

Decomposition temperature: No data available

Octanol/Water Partition Coefficient: 2 - 7

FLAMMABLE PROPERTIES:

Flammability (solid, gas): No Data Available

Flashpoint: (Tagliabue Closed Cup ASTM D56) < -45 °C (< -49 °F)

Autoignition: > 280 °C (> 536 °F)

Flammability (Explosive) Limits (% by volume in air): Lower: 1.4 Upper: 7.6

SECTION 10 STABILITY AND REACTIVITY

Reactivity: May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

Chemical Stability: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

Incompatibility With Other Materials: Not applicable

Hazardous Decomposition Products: None known (None expected)

Hazardous Polymerization: Hazardous polymerization will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

Serious Eye Damage/Irritation: The eye irritation hazard is based on evaluation of data for product components.

Skin Corrosion/Irritation: For a 4-hour exposure, the Primary Irritation Index (PII) in rabbits is: 4.8/8.0.

Skin Sensitization: This material did not cause skin sensitization reactions in a Buehler guinea pig test.

Acute Dermal Toxicity: LD50: >3.75 g/kg (rabbit).

Acute Oral Toxicity: LD50: >5 ml/kg (rat).

Acute Inhalation Toxicity: 4 hour(s) LD50: >20000 mg/m³ (rat).

Acute Toxicity Estimate: Not Determined

Germ Cell Mutagenicity: The hazard evaluation is based on data for components or a similar material.

Carcinogenicity: The hazard evaluation is based on data for components or a similar material. Gasoline has been classified as a Group 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC).

Whole gasoline exhaust has been classified as a Group 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC).

Contains benzene, which has been classified as a carcinogen by the National Toxicology Program (NTP) and a Group 1 carcinogen (carcinogenic to humans) by the International Agency for Research on Cancer (IARC).

Contains naphthalene, which has been classified as a Group 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC). Contains ethylbenzene which has been classified as a Group 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC).

Reproductive Toxicity: The hazard evaluation is based on data for components or a similar material.

Specific Target Organ Toxicity - Single Exposure: The hazard evaluation is based on data for components or a similar material.

Specific Target Organ Toxicity - Repeated Exposure: The hazard evaluation is based on data for components or a similar material.

ADDITIONAL TOXICOLOGY INFORMATION:

Gasolines are highly volatile and can produce significant concentrations of vapor at ambient temperatures. Gasoline vapor is heavier than air and at high concentrations may accumulate in confined spaces to present both safety and health hazards. When vapor exposures are low, or short duration and infrequent, such as during refueling and tanker loading/unloading, neither total hydrocarbon nor components such as benzene are likely to result in any adverse health effects. In situations such as accidents or spills where exposure to gasoline vapor is potentially high, attention should be paid to potential toxic effects of specific components. Information about specific components in gasoline can be found in Sections 2/3, 8 and 15 of this MSDS. More detailed information on the health hazards of specific gasoline components can be obtained calling the Chevron Emergency Information Center (see Section 1 for phone numbers).

Pathological misuse of solvents and gasoline, involving repeated and prolonged exposure to high concentrations of vapor is a significant exposure on which there are many reports in the medical literature. As with other solvents, persistent abuse involving repeated and prolonged exposures to high concentrations of vapor has been reported to result in central nervous system damage and eventually, death. In a study in which ten human volunteers were exposed for 30 minutes to approximately 200, 500 or 1000 ppm concentrations of gasoline vapor, irritation of the eyes was the only significant effect observed, based on both subjective and objective assessments.

Lifetime inhalation of wholly vaporized unleaded gasoline at 2056 ppm has caused increased liver tumors in female mice and kidney cancer in male rats. In their 1988 review of carcinogenic risk from gasoline, The International Agency for Research on Cancer (IARC) noted that, because published epidemiology studies did not include any exposure data, only occupations where gasoline exposure may have occurred were reviewed. These included gasoline service station attendants and automobile mechanics. IARC also noted that there was no opportunity to separate effects of combustion products from those of gasoline itself. Although IARC allocated gasoline a final overall classification of Group 2B, i.e. possibly carcinogenic to humans, this was based on limited evidence in experimental animals plus supporting evidence including the presence in gasoline of benzene. The actual evidence for carcinogenicity in humans was considered inadequate.

MUTAGENICITY: Gasoline was not mutagenic, with or without activation, in the Ames assay (*Salmonella typhimurium*), *Saccharomyces cerevisiae*, or mouse lymphoma assays. In addition, point mutations were not induced in human lymphocytes. Gasoline was not mutagenic when tested in the mouse dominant lethal assay. Administration of gasoline to rats did not cause chromosomal aberrations in their bone marrow cells.

EPIDEMIOLOGY: To explore the health effects of workers potentially exposed to gasoline vapors in the marketing and distribution sectors of the petroleum industry, the American Petroleum Institute sponsored a cohort mortality study (Publication 4555), a nested case-control study (Publication 4551), and an exposure assessment study (Publication 4552). Histories of exposure to gasoline were reconstructed for cohort of more than 18,000 employees from four companies for the time period between 1946 and 1985. The results of the cohort mortality study indicated that there was no increased mortality from either kidney cancer or leukemia among marketing and marine distribution employees who were exposed to gasoline in the petroleum industry, when compared to the general population. More importantly, based on internal comparisons, there was no association between mortality from kidney cancer or leukemia and various indices of gasoline exposure. In particular, neither duration of employment, duration of exposure, age at first exposure, year of first exposure, job category, cumulative exposure, frequency of peak exposure, nor average intensity of exposure had any effect on kidney cancer or leukemia mortality. The results of the nested case-control study confirmed the findings of the original cohort study. That is, exposure to gasoline

at the levels experienced by this cohort of distribution workers is not a significant risk factor for leukemia (all cell types), acute myeloid leukemia, kidney cancer or multiple myeloma.

This product contains ethylbenzene.

BIRTH DEFECTS AND REPRODUCTION: Ethylbenzene is not expected to cause birth defects or other developmental effects based on well-conducted studies in rabbits and rats sponsored by NIOSH. Other studies in rats and mice which reported urinary tract malformations have many deficiencies and have limited usefulness in evaluating human risk. Reproductive effects are not expected based on a NIOSH study of fertility, and lack of effects observed for sperm counts and motility, estrous cycle and pathology of reproductive organs following repeated exposures. **HEARING:** Statistically significant losses in outer hair cells (OHCs) were observed in rats exposed to ≥ 200 ppm ethylbenzene, 6 hours/day, 6 days/week for 13 weeks, after an 8-week recovery period. Following longer exposure, inner hair cells losses were also observed in rats exposed to ≥ 600 ppm ethylbenzene, but only occasionally in rats exposed to 400 ppm. The Lowest Observed Adverse Effect Level in rats (LOAEL) was 200 ppm for losses of OHCs. Guinea pigs exposed to ethylbenzene at 2,500 ppm, 6 hours/day for 5 days did not show auditory deficits or losses in OHCs. The concentration of ethylbenzene used in the JP-8 study was approximately 10 ppm. **GENETIC TOXICITY:** Ethylbenzene tested negative in the bacterial mutation test, Chinese Hamster Ovary (CHO) cell in vitro assay, sister chromatid exchange assay and an unscheduled DNA synthesis assay. Conflicting results have been reported for the mouse lymphoma cell assay. Increased micronuclei were reported in an in vitro Syrian hamster embryo cell assay; however, two in vivo micronuclei studies in mice were negative. In Syrian hamster embryo cells in vitro, cell transformation was observed at 7 days of incubation but not at 24 hours. Based on these results, ethylbenzene is not expected to be mutagenic or clastogenic. **CARCINOGENICITY:** In studies conducted by the National Toxicology Program, rats and mice were exposed to ethylbenzene at 25, 250 and 750 ppm for six hours per day, five days per week for 103 weeks. In rats exposed to 750 ppm, the incidence of kidney tubule hyperplasia and tumors was increased. Testicular tumors develop spontaneously in nearly all rats if allowed to complete their natural life span; in this study, the development of these tumors appeared to be enhanced in male rats exposed to 750 ppm. In mice, the incidences of lung tumors in males and liver tumors in females exposed to 750 ppm were increased as compared to control mice but were within the range of incidences observed historically in control mice. Other liver effects were observed in male mice exposed to 250 and 750 ppm. The incidences of hyperplasia were increased in the pituitary gland in female mice at 250 and 750 ppm and in the thyroid in male and female mice at 750 ppm.

This product contains toluene.

GENERAL TOXICITY: The primary effects of exposure to toluene in animals and humans are on the central nervous system. Solvent abusers, who typically inhale high concentrations (thousands of ppm) for brief periods of time, in addition to experiencing respiratory tract irritation, often suffer permanent central nervous system effects that include tremors, staggered gait, impaired speech, hearing and vision loss, and changes in brain tissue. Death in some solvent abusers has been attributed to cardiac arrhythmias, which appear to have been triggered by epinephrine acting on solvent sensitized cardiac tissue. Although liver and kidney effects have been seen in some solvent abusers, results of animal testing with toluene do not support these as primary target organs.

HEARING: Humans who were occupationally exposed to concentrations of toluene as low as 100 ppm for long periods of time have experienced hearing deficits. Hearing loss, as demonstrated using behavioral

and electrophysiological testing as well as by observation of structural damage to cochlear hair cells, occurred in experimental animals exposed to toluene. It also appears that toluene exposure and noise may interact to produce hearing deficits.

COLOR VISION: In a single study of workers exposed to toluene at levels under 50 ppm, small decreases in the ability to discriminate colors in the blue-yellow range have been reported for female workers. This effect, which should be investigated further, is very subtle and would not likely have been noticed by the people tested.

REPRODUCTIVE/DEVELOPMENTAL TOXICITY: Toluene may also cause mental and/or growth retardation in the children of female solvent abusers who directly inhale toluene (usually at thousands of ppm) when they are pregnant. Toluene caused growth retardation in rats and rabbits when administered at doses that were toxic to the mothers. In rats, concentrations of up to 5000 ppm did not cause birth defects. No effects were observed in the offspring at doses that did not intoxicate the pregnant animals. The exposure level at which no effects were seen (No Observed Effect Level, NOEL) is 750 ppm in the rat and 500 ppm in the rabbit.

This product contains xylene.

ACUTE TOXICITY: The primary effects of exposure to xylene in animals and humans are on the central nervous system. In addition, in some individuals, xylene exposure can sensitize cardiac tissue to epinephrine which may precipitate fatal ventricular fibrillation. **DEVELOPMENTAL TOXICITY:** Xylene has been reported to cause developmental toxicity in rats and mice exposed by inhalation during pregnancy. The effects noted consisted of delayed development and minor skeletal variations. In addition, when pregnant mice were exposed by ingestion to a level that killed nearly one-third of the test group, lethality (resorptions) and malformations (primarily cleft palate) occurred. Since xylene can cross the placenta, it may be appropriate to prevent exposure during pregnancy. **GENETIC TOXICITY/CARCINOGENICITY:** Xylene was not genotoxic in several mutagenicity testing assays including the Ames test. In a cancer study sponsored by the National Toxicology Program (NTP), technical grade xylene gave no evidence of carcinogenicity in rats or mice dosed daily for two years. **HEARING:** Mixed xylenes have been shown to cause measurable hearing loss in rats exposed to 800 ppm in the air for 14 hours per day for six weeks. Exposure to 1450 ppm xylene for 8 hours caused hearing loss while exposure to 1700 ppm for 4 hours did not. Although no information is available for lower concentrations, other chemicals that cause hearing loss in rats at relatively high concentrations do not cause hearing loss in rats at low concentrations. Worker exposure to xylenes at the permissible exposure limit (100 ppm, time-weighted average) is not expected to cause hearing loss.

This product contains naphthalene.

GENERAL TOXICITY: Exposure to naphthalene has been reported to cause methemoglobinemia and/or hemolytic anemia, especially in humans deficient in the enzyme glucose-6-phosphate dehydrogenase. Laboratory animals given repeated oral doses of naphthalene have developed cataracts.

REPRODUCTIVE TOXICITY AND BIRTH DEFECTS: Naphthalene did not cause birth defects when administered orally to rabbits, rats, and mice during pregnancy, but slightly reduced litter size in mice at dose levels that were lethal to the pregnant females. Naphthalene has been reported to cross the human placenta. **GENETIC TOXICITY:** Naphthalene caused chromosome aberrations and sister chromatid exchanges in Chinese hamster ovary cells, but was not a mutagen in several other in-vitro tests. **CARCINOGENICITY:** In a study conducted by the National Toxicology Program (NTP), mice exposed

to 10 or 30 ppm of naphthalene by inhalation daily for two years had chronic inflammation of the nose and lungs and increased incidences of metaplasia in those tissues. The incidence of benign lung tumors (alveolar/bronchiolar adenomas) was significantly increased in the high-dose female group but not in the male groups. In another two-year inhalation study conducted by NTP, exposure of rats to 10, 30, and 60 ppm naphthalene caused increases in the incidences of a variety of nonneoplastic lesions in the nose. Increases in nasal tumors were seen in both sexes, including olfactory neuroblastomas in females at 60 ppm and adenomas of the respiratory epithelium in males at all exposure levels. The relevance of these effects to humans has not been established. No carcinogenic effect was reported in a 2-year feeding study in rats receiving naphthalene at 41 mg/kg/day.

This product contains cyclohexane.

Cyclohexane primarily affects the central nervous systems of laboratory animals and humans. Acute or prolonged inhalation of cyclohexane at levels below the recommended exposure limits does not result in toxic effects while acute exposures to levels above these recommended limits can cause reversible central nervous system depression. Prolonged exposures of laboratory animals to high levels (up to low thousands of parts per million) have also caused reversible effects which included hyperactivity, diminished response to stimuli, and adaptive liver changes while very high levels (high thousands of parts per million) were fatal. No developmental effects were seen in rats or rabbits following exposures of up to 7000 ppm cyclohexane. No reproductive effects occurred in rats, although postnatal pup growth was reduced at 7000 ppm in a similar manner as observed in the parental animals. Cyclohexane has not been shown to be mutagenic in several in vitro and in vivo assays and has not produced tumors in several dermal application long-term bioassays. Based on these results and the lack of any mutagenic or genotoxic metabolites, cyclohexane is not expected to be mutagenic or genotoxic. Following dermal exposure, cyclohexane is rapidly absorbed, metabolized, and excreted.

This product contains ethanol (ethyl alcohol).

Chronic ingestion of ethanol can damage the liver, nervous system and heart. Chronic heavy consumption of alcoholic beverages has been associated with an increased risk of cancer. Ingestion of ethanol during pregnancy can cause human birth defects such as fetal alcohol syndrome. This product contains butane. An atmospheric concentration of 100,000 ppm (10%) butane is not noticeably irritating to the eyes, nose or respiratory tract, but will produce slight dizziness in a few minutes of exposure. No chronic systemic effect has been reported from occupational exposure.

This product contains benzene.

GENETIC TOXICITY/CANCER: Repeated or prolonged breathing of benzene vapor has been associated with the development of chromosomal damage in experimental animals and various blood diseases in humans ranging from aplastic anemia to leukemia (a form of cancer). All of these diseases can be fatal. In some individuals, benzene exposure can sensitize cardiac tissue to epinephrine which may precipitate fatal ventricular fibrillation.

REPRODUCTIVE/DEVELOPMENTAL TOXICITY: No birth defects have been shown to occur in pregnant laboratory animals exposed to doses not toxic to the mother. However, some evidence of fetal toxicity such as delayed physical development has been seen at such levels. The available information on the effects of benzene on human pregnancies is inadequate but it has been established that benzene can cross the human placenta.

OCCUPATIONAL: The OSHA Benzene Standard (29 CFR 1910.1028) contains detailed requirements for training, exposure monitoring, respiratory protection and medical surveillance triggered by the exposure level. Refer to the OSHA Standard before using this product.

This product contains n-hexane.

TARGET ORGAN TOXICITY: Prolonged or repeated ingestion, skin contact or breathing of vapors of n-hexane has been shown to cause peripheral neuropathy. Recovery ranges from no recovery to complete recovery depending upon the severity of the nerve damage. Exposure to 1000 ppm n-hexane for 18 hr/day for 61 days has been shown to cause testicular damage in rats. However, when rats were exposed to higher concentrations for shorter daily periods (10,000 ppm for 6 h/day, 5 days/wk for 13 weeks), no testicular lesions were seen.

CARCINOGENICITY: Chronic exposure to commercial hexane (52% n-hexane) at a concentration of 9000ppm was not carcinogenic to rats or to male mice, but did result in an increased incidence of liver tumors in female mice. No carcinogenic effects were observed in female mice exposed to 900 or 3000 ppm hexane or in male mice. The relevance for humans of these hexane-induced mouse liver tumors is questionable.

GENETIC TOXICITY: n-Hexane caused chromosome aberrations in bone marrow of rats, but was negative in the AMES and mouse lymphoma tests.

SECTION 12 ECOLOGICAL INFORMATION

ECOTOXICITY

This material is expected to be toxic to aquatic organisms and may cause long-term adverse effects in the aquatic environment.

48 hour(s) LC50: 3.0 mg/l (Daphnia magna)
96 hour(s) LC50: 1.8 mg/l (Mysidopsis bahia)
96 hour(s) LC50: 8.3 mg/l (Cyprinodon variegatus)
96 hour(s) LC50: 2.7 mg/l (Oncorhynchus mykiss)

MOBILITY

No data available.

PERSISTENCE AND DEGRADABILITY

This material is expected to be readily biodegradable. Following spillage, the more volatile components of gasoline will be rapidly lost, with concurrent dissolution of these and other constituents into the water. Factors such as local environmental conditions (temperature, wind, mixing or wave action, soil type, etc), photo-oxidation, biodegradation and adsorption onto suspended sediments, can contribute to the weathering of spilled gasoline.

The aqueous solubility of non-oxygenated unleaded gasoline, based on analysis of benzene, toluene, ethylbenzene+xylenes and naphthalene, is reported to be 112 mg/l. Solubility data on individual gasoline

constituents also available.

POTENTIAL TO BIOACCUMULATE

Bioconcentration Factor: No data available.

Octanol/Water Partition Coefficient: 2 - 7

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 international, country, or local laws and regulations. Check governmental regulations and local authorities for approved disposal of this material.

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.

DOT Shipping Description: UN1203, GASOLINE, 3, II; OPTIONAL DISCLOSURE: UN1203, GASOLINE, 3, II, MARINE POLLUTANT (GASOLINE)

IMO/IMDG Shipping Description: UN1203, GASOLINE, 3, II, FLASH POINT SEE SECTION 5 OR 9, MARINE POLLUTANT (GASOLINE)

ICAO/IATA Shipping Description: UN1203, GASOLINE, 3, II

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code:
Not applicable

SECTION 15 REGULATORY INFORMATION

EPCRA 311/312 CATEGORIES:	1. Immediate (Acute) Health Effects:	YES
	2. Delayed (Chronic) Health Effects:	YES
	3. Fire Hazard:	YES
	4. Sudden Release of Pressure Hazard:	NO
	5. Reactivity Hazard:	NO

REGULATORY LISTS SEARCHED:

01-1=IARC Group 1	03=EPCRA 313
01-2A=IARC Group 2A	04=CA Proposition 65
01-2B=IARC Group 2B	05=MA RTK
02=NTP Carcinogen	06=NJ RTK
	07=PA RTK

The following components of this material are found on the regulatory lists indicated.

Cyclohexane	05, 06, 07
Heptane	05, 06, 07
Methylcyclohexane	05, 06, 07
Pentane, 2,2,4-trimethyl- (Isooctane)	05, 06, 07
Naphthalene	01-2B, 02, 04, 05, 06, 07
Butane	05, 06, 07
Ethanol	01-1, 02, 04, 05, 06, 07
Gasoline	01-2B, 07
Ethyl benzene	01-2B, 03, 04, 05, 06, 07
Toluene (methylbenzene)	04, 05, 06, 07
Benzene	01-1, 02, 03, 04, 05, 06, 07
Hexane	05, 06, 07
Xylene (contains o-, m-, & p- xylene isomers in varying amounts)	03, 05, 06, 07

CERCLA REPORTABLE QUANTITIES(RQ)/EPCRA 302 THRESHOLD PLANNING QUANTITIES(TPQ):

Component	Component RQ	Component TPQ	Product RQ
Benzene	10 lbs	None	186 lbs
Cyclohexane	1000 lbs	None	34188 lbs
Ethyl benzene	1000 lbs	None	34964 lbs
Hexane	5000 lbs	None	129149 lbs
Naphthalene	100 lbs	None	4000 lbs
Pentane, 2,2,4-trimethyl- (Isooctane)	1000 lbs	None	6270 lbs
Toluene (methylbenzene)	1000 lbs	None	2627 lbs
Xylene (contains o-, m-, & p- xylene isomers in varying amounts)	100 lbs	None	649 lbs

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).

SECTION 16 OTHER INFORMATION

NFPA RATINGS: Health: 1 Flammability: 3 Reactivity: 0

HMIS RATINGS: Health: 2* Flammability: 3 Reactivity: 0

(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, *- Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

Additional Product Number(s): 201003, 201004, 201006, 201007, 201008, 201010, 201011, 201018, 201021, 201025, 201031, 201032, 201033, 201034, 201036, 201037, 201038, 201041, 201043, 201046, 201048, 201064, 201208, 201210, 201211, 201212, 201230, 201231, 201232, 201260, 201261, 201262, 201271, 201272, 201273, 201280, 201281, 201282, 201288, 201290, 201291, 201292, 201851, 201852, 201858, 201859, 201860, 204004, 204005, 204012, 204013, 204024, 204025, 204048, 204049, 204072, 204073, 204090, 204091, 204106, 204107, 204118, 204119, 204142, 204143, 204166, 204167, 204190, 204191, 204202, 204203, 204209, 204214, 204215, 204226, 204227, 204250, 204251, 204274, 204275, 204292, 204293, 204325, 204326, 204360, 204361, 204366, 204367, 204372, 204373, 204378, 204379, 204384, 204385, 204390, 204391, 204396, 204397, 204402, 204403, 204408, 204409, 204414, 204415, 204420, 204421, 204426, 204427, 204432, 204433, 204438, 204439, 204468, 204469, 204486, 204487, 204504, 204505, 204522, 204523, 204540, 204541, 204558, 204559, 204576, 204577, 204594, 204595, 204612, 204613, 204630, 204631, 204648, 204649, 204666, 204667, 204692, 204693, 204698, 204699, 204704, 204705, 204710, 204711, 204723, 204724, 204729, 204730

REVISION STATEMENT:

SECTION 01 - Product Code(s) information was modified.

SECTION 05 - Extinguishing Media information was modified.

SECTION 08 - Occupational Exposure Limit Table information was modified.

SECTION 16 - HMIS Rating information was modified.

SECTION 16 - NFPA Rating information was modified.

Revision Date: October 04, 2016

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
GHS - Globally Harmonized System	CAS - Chemical Abstract Service Number
ACGIH - American Conference of Governmental Industrial Hygienists	IMO/IMDG - International Maritime Dangerous Goods Code
API - American Petroleum Institute	SDS - Safety Data Sheet
HMIS - Hazardous Materials Information System	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
NCEL - New Chemical Exposure Limit	EPA - Environmental Protection Agency
SCBA - Self-Contained Breathing Apparatus	

Prepared according to the 29 CFR 1910.1200 (2012) by Chevron Energy Technology Company, 6001 Bollinger Canyon Road, San Ramon, CA 94583.

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.