ASPHALT INSPECTION FORM

Darling Ingredients - Tacoma, Washington Facility

Facility No.: 25455514, Cleanup Site No.: 8475, VCP Project No.: SW1317

Asphalt inspection is a requirement in the Corrective Action Plan (Tetra Tech 2020) and as part of Washington Department of Ecology's (Ecology's) No Further Action (NFA) designation for the Darling Ingredients facility at 2041 Marc Avenue in Tacoma, Washington.

This inspection form was developed as a basic guide for conducting an inspection of the asphalt cap at the facility to help identify areas that may be of potential concern. Areas identified may require more frequent monitoring, or additional inspection and possibly repair by a qualified asphalt contractor to maintain asphalt integrity. Maintenance of asphalt cracks is critical to prevent further damage and/or limit pathways for contaminant migration to, or mobilization of existing contaminants in, the subsurface.

GENERAL INSPECTION INFORMATION			
Company Conducting Inspection: _X__Tetra Tech ___Darling Ingredients		Date: 2-1-2023	Time:1000
Inspection Conducted By: Name: Natalie J. Morrow, LG, LHG	Weather at Time of Inspection: _39__ Temperature (˚F)		
Signature:	___Sunny _X__Partly Sunny ___Mostly Cloudy ___Overcast ___ Raining ___ Rain within Past 24 hours		

ASPHALT INSPECTION	
Complete the following questions and document areas identified on the attached map. If unsure, document and describe the condition(s) to the best of your ability. Additional consultation with an asphalt specialist may be needed for areas identified as a concern.	
1. General Asphalt Surface Conditions at Time of Inspection:	
___ Wet ___ Mostly Wet with Dry Patches ___ Dry _X__Mostly Dry with Wet Patches	
2. Areas of Ponded Water, Indications Ponded Water in the Past, or Moisture/Water Evident in Cracks? If yes, document these areas below and on the attached map.	**_X__Yes ___No**
How many areas were identified with ponded water or indications of past ponded water (e.g., asphalt staining, sediment accumulation, prior observations), or evidence of water? *Minor ponding at north drain adjacent to weigh scale ramp, ponding at south drain near work shop. Two additional very small areas of ponded water. Visible areas of asphalt in each appeared in good condition. Moisture present along edges of cracks and joints of asphalt patch areas.*	# of Areas __2+__
For the areas identified, are there indications of asphalt degradation (cracking, loose rock, sand, broken asphalt, etc.)?	___Yes _X__No
List the location(s) of the areas identified that indicate potential degradation and describe the condition observed. Locate the locations on the map. *See attached map and photograph log. Alligator cracks and some linear cracks observed primarily on the north side of the work shop and lunchroom buildings. The north gate with weigh scale is the main site entry for haul trucks in and out of the facility.* *Note: Crack locations on attached map are approximate.*	
3. Cracking – Were any of the following types of cracking observed? If yes, document cracks below and on the attached map.	**_X__Yes ___No**
Alligator Cracks? *(Resemble chicken wire or alligator skin and are caused by repeated traffic loading). If yes, how many? Alligator cracking in multiple areas, mostly on the north side of the work shop and lunchroom buildings in high traffic area. See attached map.*	_X__Yes ___No
Shrinkage Cracks? *(Caused by temperature variations that can expand and contract pavement, leading to stress and cracking). If yes, how many? Discuss the location and characteristics of features identified:*	___Yes _X__No
Reflective Cracks or Opening Along Joints? *(Occurs when the pavement overlay was done in unsecured conditions, leading to openings of joints, which can allow water to get to the underlying aggregate and cause pavement damage).* *Possible reflective cracks – shorter limited and one longer linear crack on north side of shop along truck route. Multiple areas of asphalt patches. Crack spacing and joints along asphalt patch edges did not appear to have lateral expansion.*	_X__Yes ___No

ASPHALT INSPECTION FORM

Darling Ingredients - Tacoma, Washington Facility

Facility No.: 25455514, Cleanup Site No.: 8475, VCP Project No.: SW1317

Edge Cracks? *(Occur due to poor shoulder support, frost action, or inadequate drainage. Usually begin as hairline cracks that can be seal coated.) Minor along edge or alligator cracking near asphalt edge near well MW-2.*	_X__Yes ___No
Cracks within Wheel Paths? *North side of work shop and lunchroom buildings along main truck route in and out of facility.*	__X_Yes ___No
Cracks from Swell?	___Yes _X__No
Edge Cracks/Failure?	___Yes ___No
Crack Seals Present? Identify location of crack sealant areas and describe their condition (good, worn, lifting, cracked, etc.). *Long linear crack adjacent to truck route on north side of work shop appeared to have been sealed at one time due to gray discoloration present along the crack. Facility manager said traditional asphalt sealant has been used in the past but peals up when power washed with hot water.*	__X_Yes ___No
How many areas of the above types of cracking were identified? *Two primary areas along truck route north of work shop and lunchroom buildings, and one minor area of alligator cracking near truck shop at northeast corner of truck route.*	# of Areas __3__
List the location(s) of the cracks identified and describe the condition and pattern observed (hairline, linear, circular, etc.). Locate the crack areas on the map. *See map. Cracks observed appeared to be linear and alligator cracking. Multiple locations of asphalt joints along asphalt patches but appeared in good condition.*	
4. Potholes identified?	**___Yes _X__No**
How many potholes were identified? *One area with three or four very small, shallow pits in asphalt observed adjacent to the concrete between office building and rendering building. The pits were in asphalt – no soil or gravel present.*	# of Areas __1__
List the location(s) of the potholes identified and describe the condition observed. Locate the potholes on the map. *Adjacent to concrete pad between the office building and rendering plant.*	
5. Other Issues?	**___Yes _X__No**
Asphalt lifting? (e.g., due to tree roots or another subsurface feature). If yes, describe and locate on the map.	___Yes _X__No
Asphalt gaps? (e.g,, significant gaps around features such as drains, bollards, gutters, posts, foundations, etc. that allows water to drain to the subsurface). If yes, describe and locate on the map.	___Yes __X_No
Rutting from Vehicles or Equipment? If yes, describe and locate on the map.	___Yes _X__No
Discoloration, fading, wear that may indicate a future area of concern? If yes, describe and locate on the map.	___Yes _X__No
Vegetation Growing in Cracks/Micro-Cracks or Along Asphalt Edges that Could Lead to Cracking? If yes, describe and locate on the map.	___Yes ___No
Other Observations? *Note: Truck route has multiple layers of asphalt.*	___Yes _X__No
6. Were areas identified that require potential follow-up with the facility manager, more frequent monitoring, or asphalt maintenance contractor?	**___Yes _X__No**
If yes, discuss which areas require follow up and the type of recommended follow-up. *The areas identified within this report were discussed with the Environmental Affairs Manager and Facility Manager on February 1, 2023 during the site visit. Daring occasionally contracts with Reed Asphalt to repair potholes and other asphalt concerns at the facility. Darling will consult and coordinate with Reed Asphalt, or similar contractor, to evaluate asphalt concerns on an as needed basis.*	

ASPHALT INSPECTION FORM

Darling Ingredients - Tacoma, Washington Facility

Facility No.: 25455514, Cleanup Site No.: 8475, VCP Project No.: SW1317

FORM DISTRIBUTION

Provide a copy of this completed and signed inspection form to the following. A copy of the completed form will be submitted to Ecology as part of the NFA requirement.

Darling Ingredients personnel:

Tacoma Facility Manager – Charles Berg - cberg@darlingii.com
Martin Guthrie – Environmental Affairs Manager mguthrie@darlingii.com
Jon Elrod – VP of Environmental Affairs - jelrod@darlingii.com

Environmental Consultant

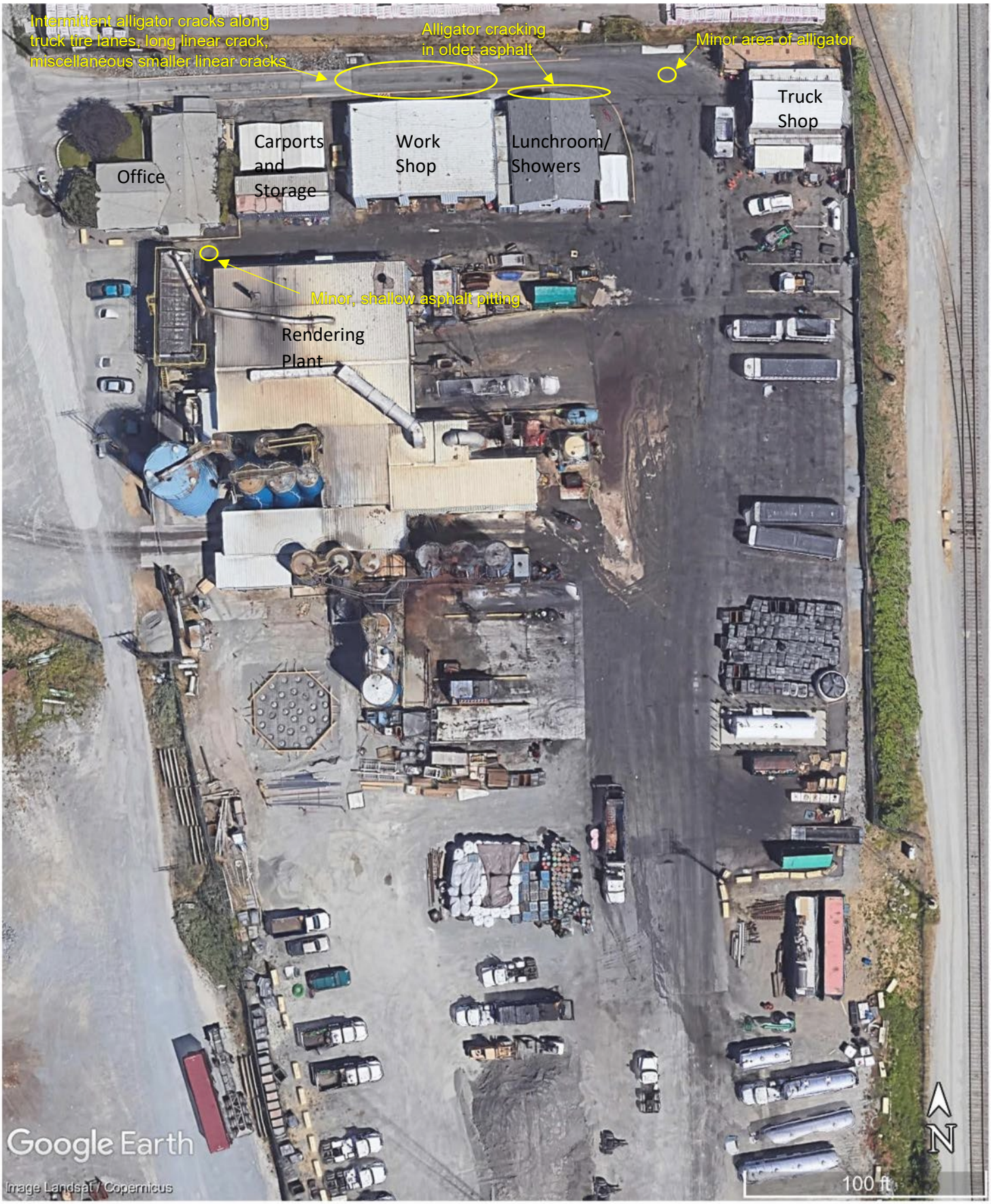
Tetra Tech, Inc.: Natalie Morrow natalie.morrow@tetratech.com

406-327-5235 direct 406-370-8170 cell
406-543-3045 main office

ASPHALT PHOTOGRAPH LOG

Darling Ingredients - Tacoma, Washington Facility

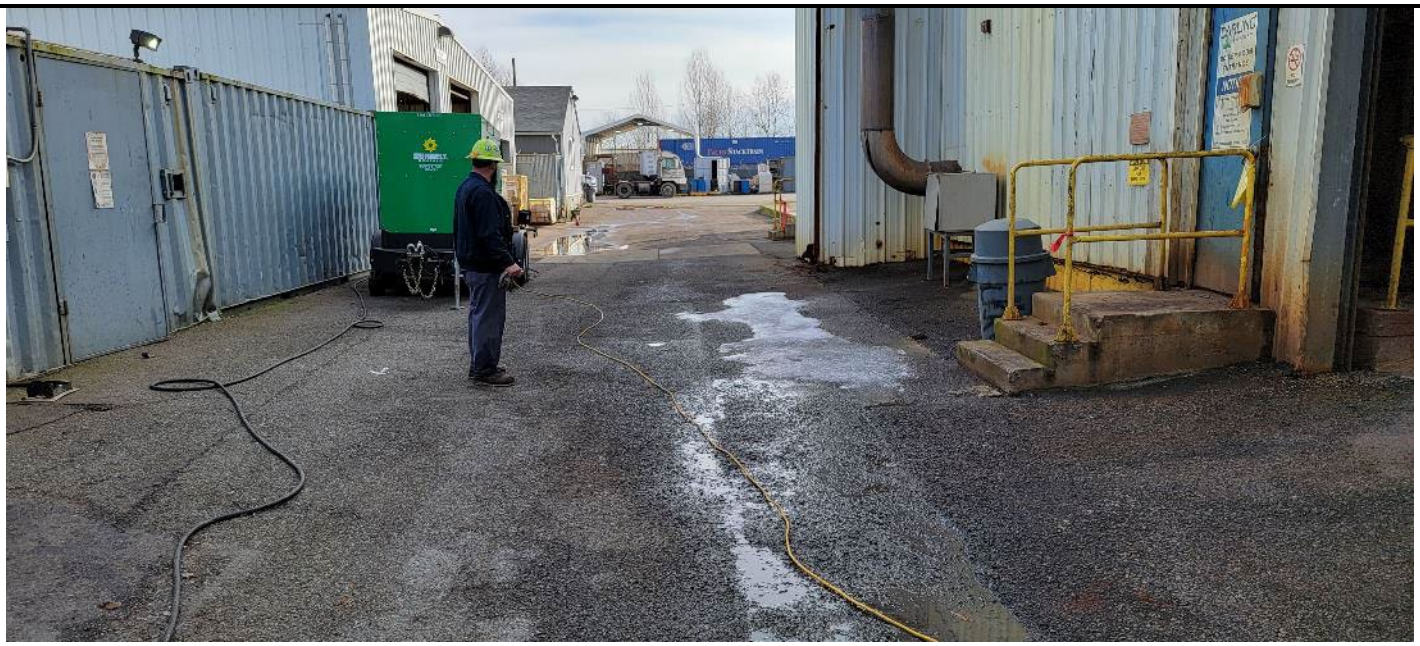
Facility No.: 25455514, Cleanup Site No.: 8475, VCP Project No.: SW1317



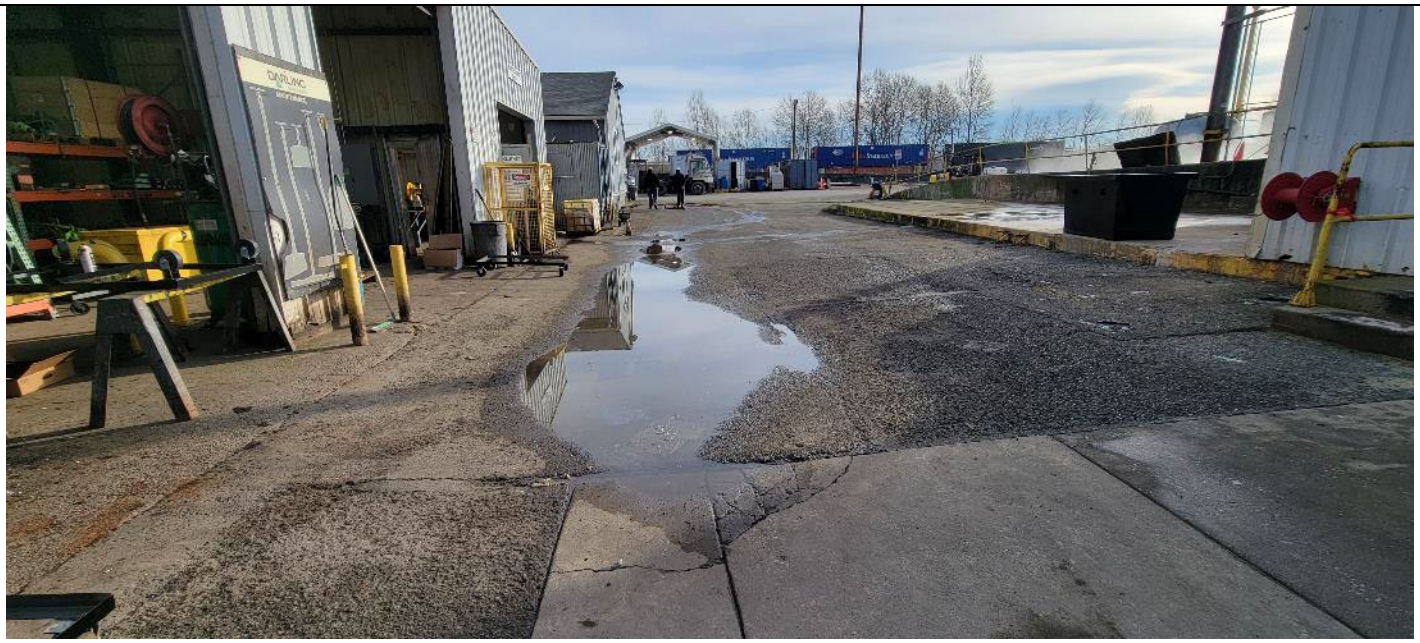
ASPHALT PHOTOGRAPH LOG

Darling Ingredients - Tacoma, Washington Facility

Facility No.: 25455514, Cleanup Site No.: 8475, VCP Project No.: SW1317



Area between office and rendering plant.

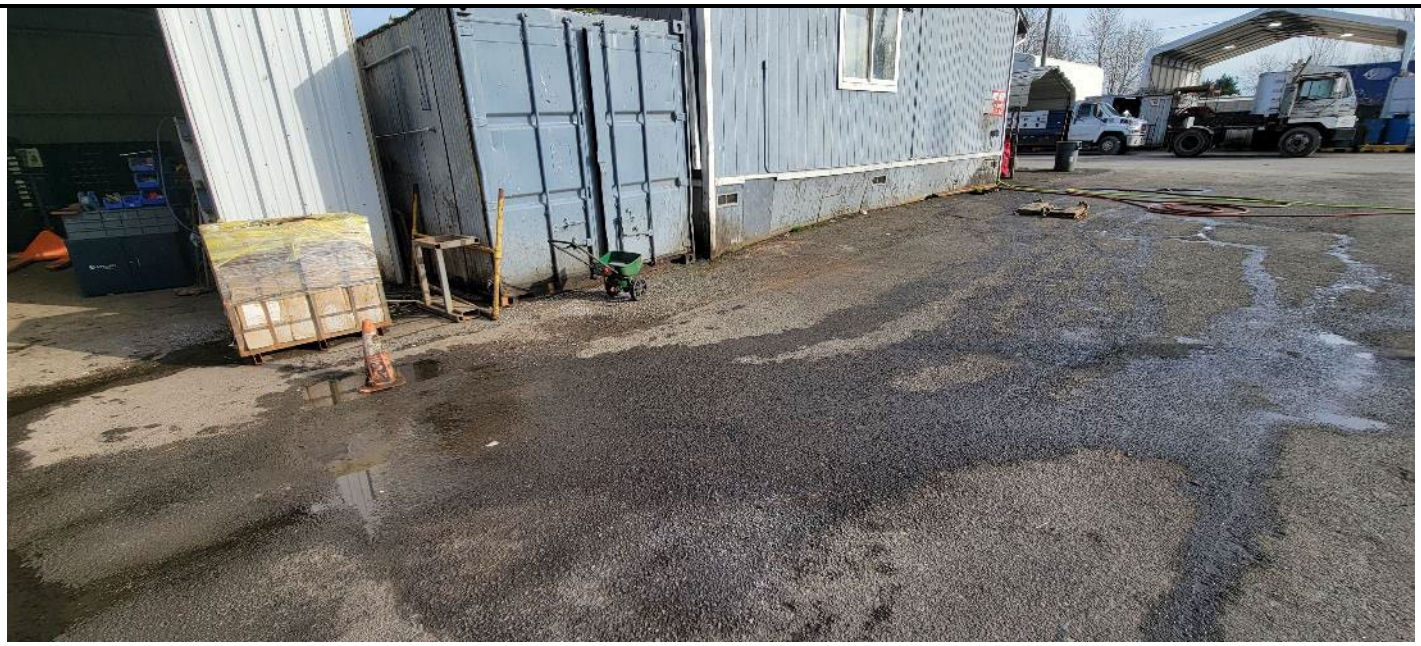


South drain area. Multiple concrete patches in area of drain.

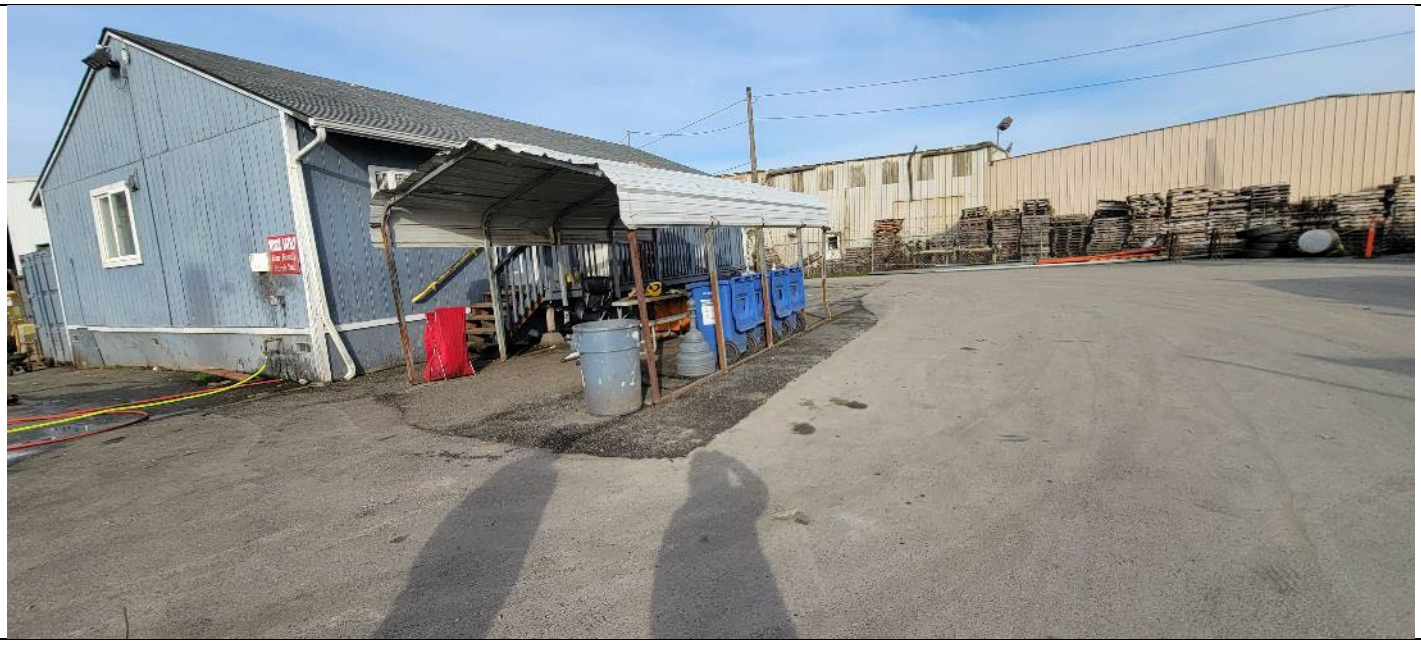
ASPHALT PHOTOGRAPH LOG

Darling Ingredients - Tacoma, Washington Facility

Facility No.: 25455514, Cleanup Site No.: 8475, VCP Project No.: SW1317



South side of lunchroom building.

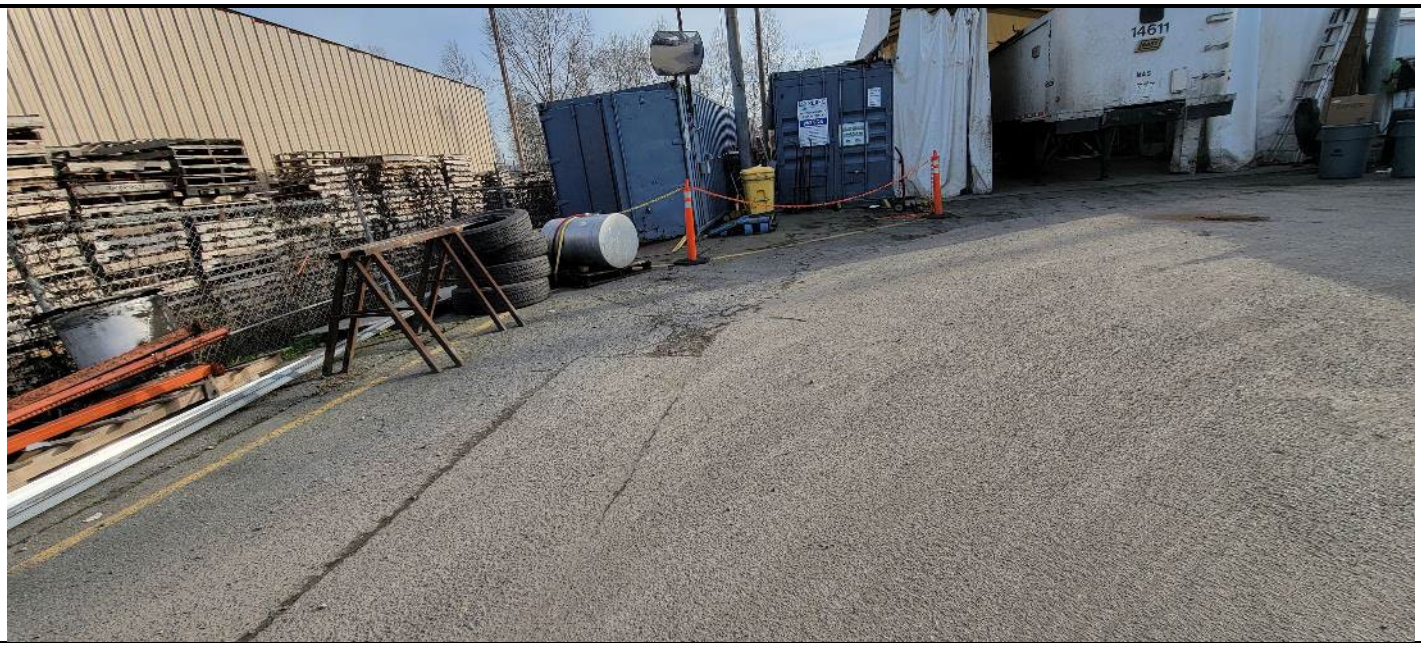


Looking southwest from near former MFG-3 well location. Older asphalt in area of lunchroom building and carport.

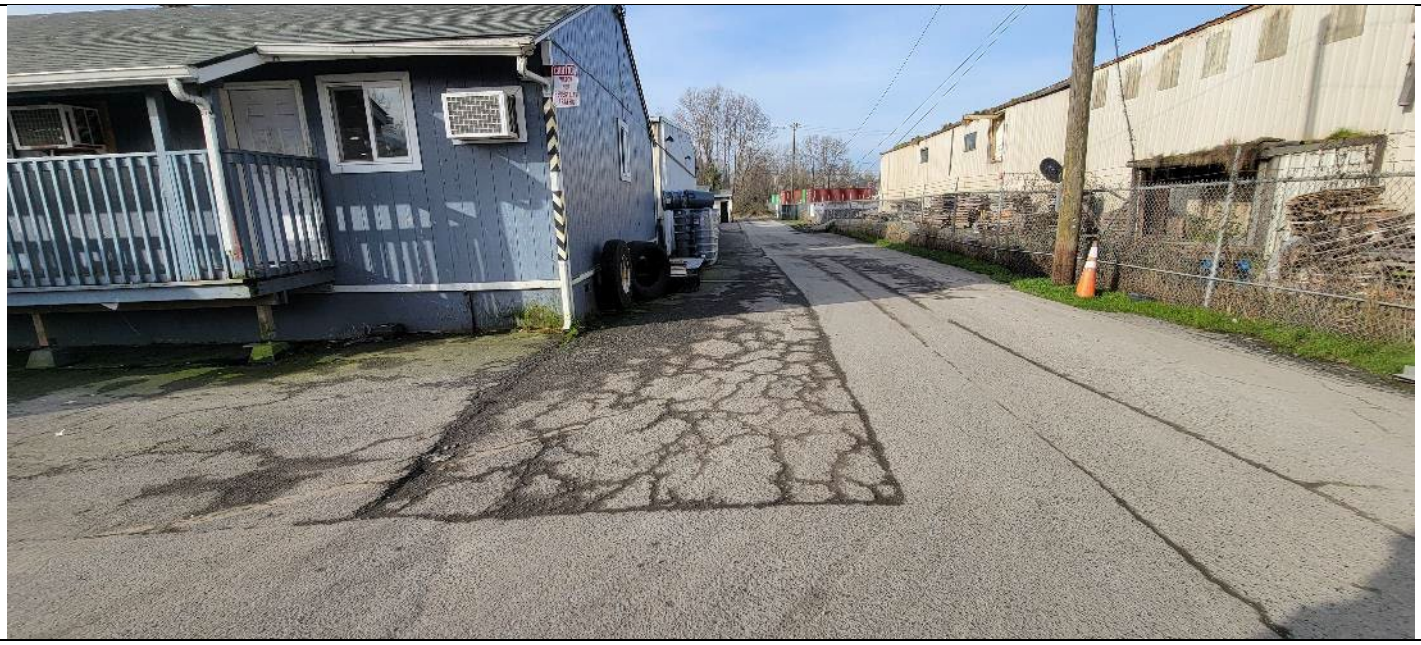
ASPHALT PHOTOGRAPH LOG

Darling Ingredients - Tacoma, Washington Facility

Facility No.: 25455514, Cleanup Site No.: 8475, VCP Project No.: SW1317



Small area of alligator cracking at end of concrete patch near truck shop.

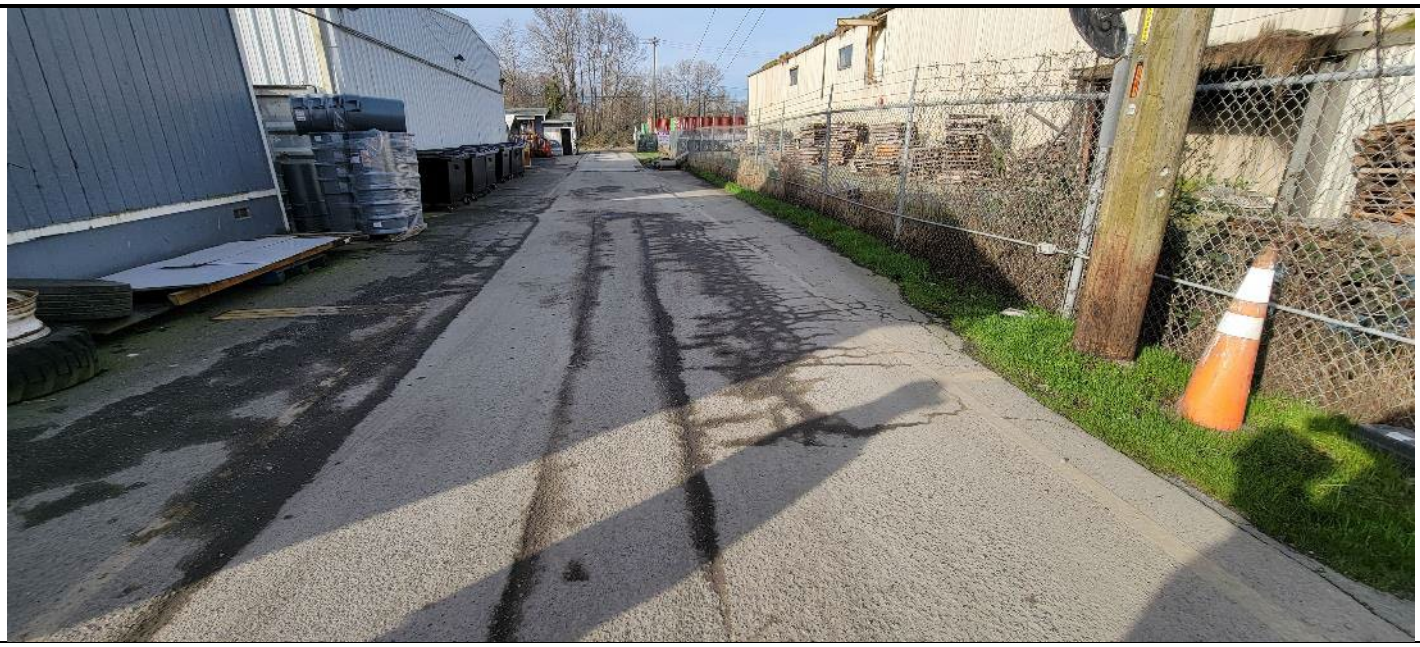


Alligator cracking northeast and north of lunchroom building. Multiple concrete patches in area.

ASPHALT PHOTOGRAPH LOG

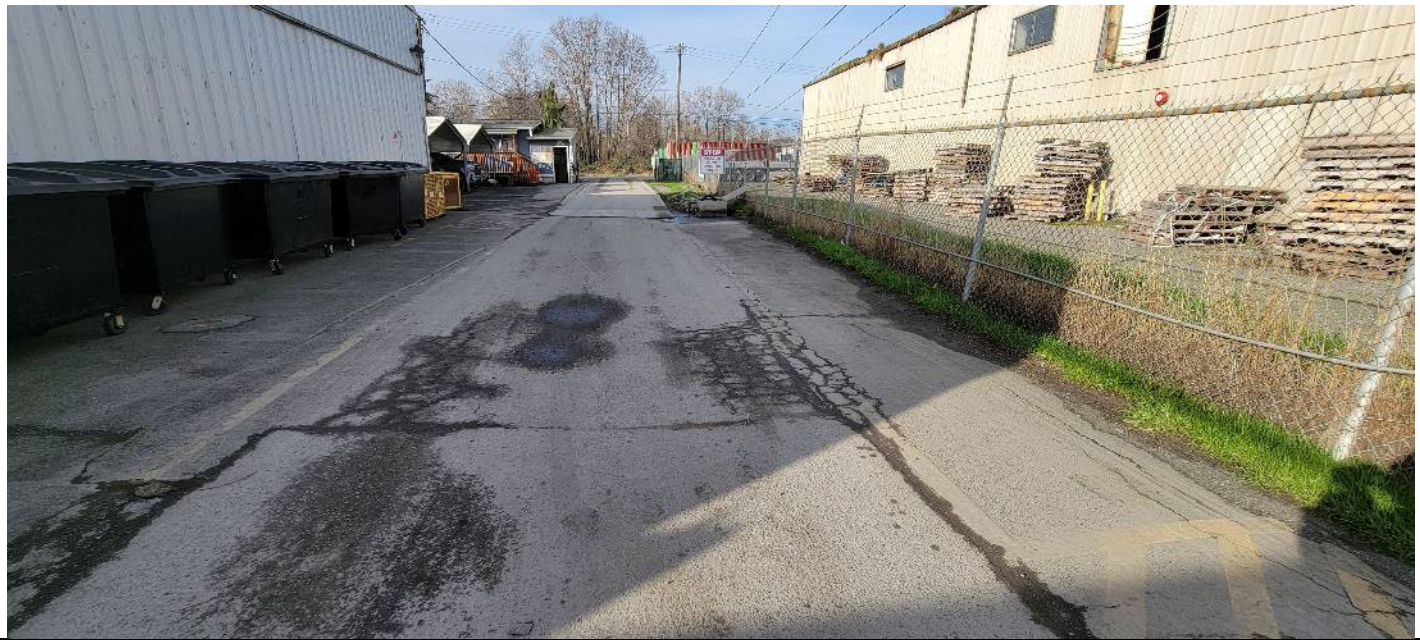
Darling Ingredients - Tacoma, Washington Facility

Facility No.: 25455514, Cleanup Site No.: 8475, VCP Project No.: SW1317



Alligator cracking on north side of shop along main truck route. Some cracking along north asphalt edge. Additional asphalt patch areas.

a

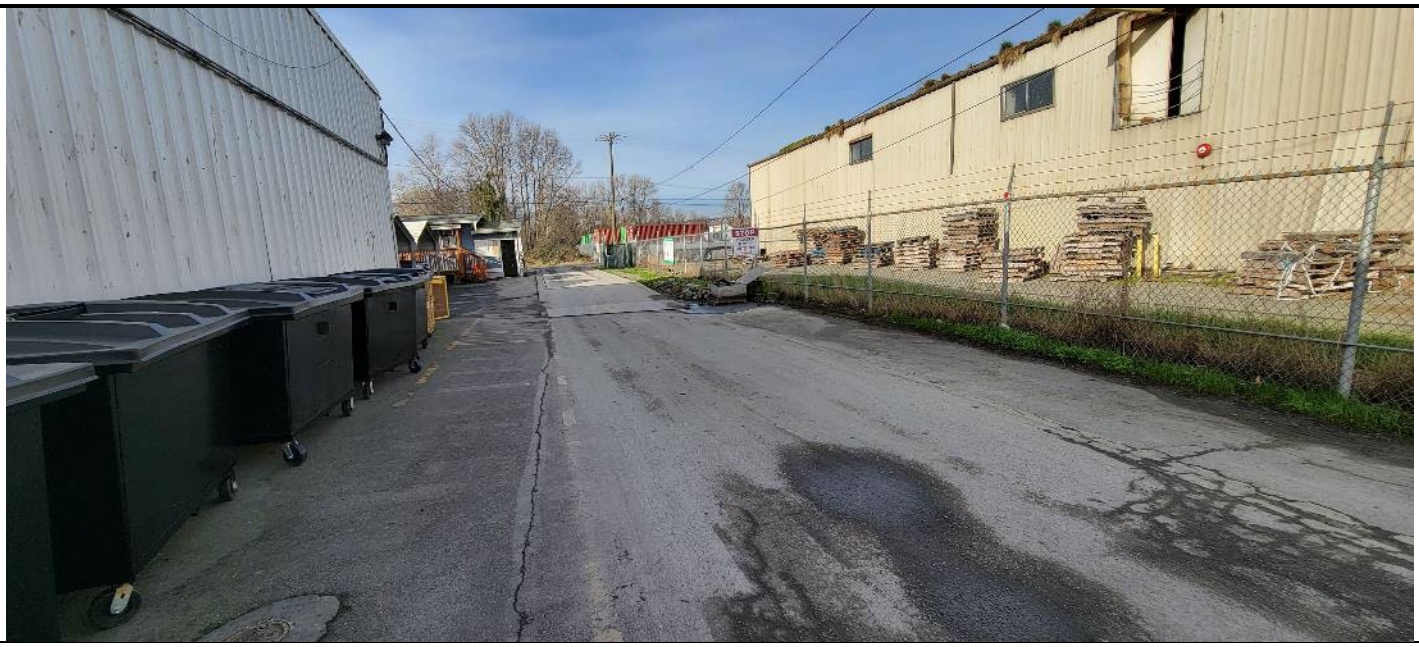


More alligator cracking along truck route north of shop.

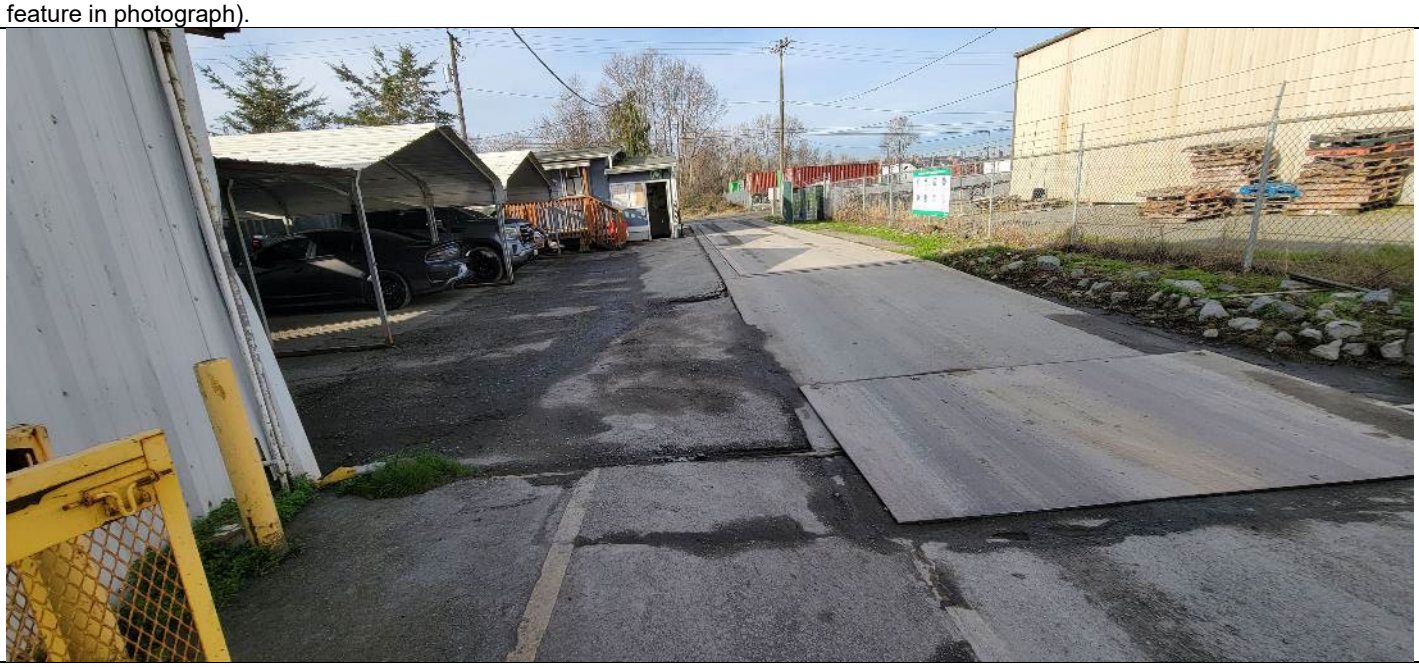
ASPHALT PHOTOGRAPH LOG

Darling Ingredients - Tacoma, Washington Facility

Facility No.: 25455514, Cleanup Site No.: 8475, VCP Project No.: SW1317



Linear crack that may have received patch material in the past; located n north side of shop near well MFG-1 (bottom left circular feature in photograph).



Miscellaneous small linear cracks near truck scale and car ports. Drain cut from building to weigh scale ramp in middle left of photograph.