Annex I - Saint Kitts and Nevis

Saint Kitts and Nevis is a two-island Federation in the Leeward Islands of the eastern Caribbean, with a combined population of approximately 53,000. Saint Kitts, the larger of the two islands, covers 168 square kilometres (65 square miles) and rises to 1,156 metres at Mount Liamuiga; Nevis, 3 kilometres to the south-east, covers 93 square kilometres (36 square miles) and is dominated by Nevis Peak at 985 metres. The capital, Basseterre, lies on the south-western coast of Saint Kitts, while Nevis is administered separately by the Nevis Island Administration. In total **553.55 kg/l of obsolete pesticides**, **1,150 kg of mercury-added products (MAPs), 2,515 kg of PCBs and 2,920 L of AFFF Firefighting foams**, in both Saint Kitts and Nevis, have been nationally endorsed for consideration for disposal.

Note: The **1,150 kg of MAPs** at KN-08 SKELEC – some 4,600 discarded mercury-containing light bulbs, held in drums inside a 40' shipping container at the rear of the generation plant – has been identified as a stockpile that **Saint Kitts and Nevis wishes to eliminate as a priority**. It is stored alongside approximately 102 m³ of streetlamps removed from service, held in one and a half 40ft containers; the field inventory describes these as failed LED streetlamps, and it has not been established whether mercury-containing bulbs remain in the fittings.

Table 1 - Summary of the on-the-Ground Identified Stockpiles, by Site (KN-XX) [1]

Site Ref.	Site Name	GPS Coordinates	Type of Waste	Quantity (l/kg)
KN-01	Saint Kitts Department of Agriculture Pesticide Store, La Guerite, Basseterre	17°18'00.0"N 62°44'02.4"W	Obsolete pesticides	166.7

[1] The stockpiles in the colour "purple" have been nationally prioritized for disposal. The remaining stockpiles in the colour "black" are to be considered for disposal once the prioritised stockpiles have been accounted for.

Site Ref.	Site Name	GPS Coordinates	Type of Waste	Quantity (l/kg)
KN-02	Long Point Seaport, Nevis Air and Sea Ports Authority	17°06'36.0"N 62°37'19.2"W	Obsolete pesticides	89.3
KN-03	NEVLEC, Prospect Estate, Nevis	17°07'33.6"N 62°36'43.2"W	PCB	0
KN-05	Department of Agriculture, Prospect Estate, Nevis	17°07'30.0"N 62°36'32.4"W	Obsolete pesticides	8.1
KN-06	Robert L. Bradshaw International Airport Fire Hall	17°18'46.8"N 62°43'12.0"W	AFFF	2,920
KN-08	SKELEC, Transmission & Distribution and Generation sites, Basseterre	17°18'21.6"N 62°42'54.0"W	MAPs[2]	1,150
KN-08	SKELEC, Transmission & Distribution and Generation sites, Basseterre	17°18'21.6"N 62°42'54.0"W	PCB	2,515
KN-09	CARDI, Bird Rock, Basseterre	17°17'55.0"N 62°43'38.0"W	Obsolete pesticides	8.5

KN-01 Saint Kitts Department of Agriculture Pesticide Store, La Guerite, Basseterre (17°18'00.0"N 62°44'02.4"W)

The Department of Agriculture of the Saint Kitts Island Administration has been active on this site since 1990. The obsolete pesticide stock is held in a 40' shipping container that has been modified with louvred vents to allow ventilation; fertiliser in bags and other materials are stored in the same container, and part of the stock is still held in the adjoining products store awaiting transfer to it. Storing obsolete pesticides alongside bags of fertilizer and new materials in a container without a floor creates cross-contamination and environmental leaching risks. The container stands on unpaved ground with no floor, inside a partially fenced compound reached by a dirt track that is not suitable for trucks; access is possible with a four-wheel-drive vehicle. The Contractor will need to plan for smaller shuttle vehicles to transport repackaged waste to a paved area or port for loading

[2] The National Focal Points have identified this stockpile as the highest priority for disposal.

onto shipping containers or trucks. The store lies in an urban area with government offices, laboratories, experimental field plots, worker sheds and a military base nearby, and the assessment report recommends that the stockpile be removed and disposed of, or else relocated to an interim storage site to await final disposal.

Comments from the Independent Supervisor: Bellis 38 WG is a current BASF fungicide and was presumably treated as usable stock rather than as waste and was therefore not included for consideration.

Table 2 – Inventory List of relevant Waste Streams at the Site

Type of waste	Description	Condition of Packaging	No. of packaging	Type of packaging	Quantity (kg/l)
Obsolete pesticides	Fungicides – Acrobat MZ 69 WP (dimethomorph 9 % / mancozeb 60 %), Coback 77 % WP (copper hydroxide 77 %), Zampro DM 52.5 SC (dimethomorph / ametoctradin)	Good	85	Plastic bags and bottles (0.2–0.375 kg; 0.25 l)	26.9

Type of waste	Description	Condition of Packaging	No. of packaging	Type of packaging	Quantity (kg/l)
Obsolete pesticides	Insecticides – Agrinate 90 SP (methomyl 90 %), Advance 10 EC (pyriproxyfen), Indox 14.5 % SC (indoxacarb), Pirate 24 SC (chlorfenapyr), Trimazine 75 % WP (cyromazine), Carimectin 2 % EC (emamectin benzoate), Regency 200 SC (fipronil)	Good	883	Plastic bags and bottles (0.05–1 kg / l)	133.8
Obsolete pesticides	Herbicide – Prowl 45.5 CS (pendimethalin 45.5 %)	Good	6	Plastic bottle (1 l)	6
Total obsolete pesticides					**166.7**

Table 3 - Site conditions

Site conditions	
Status of stored waste	No signs of spills
Building conditions	Good, no major signs of damage
Floor conditions	None
Site control	Yes, (partially) fenced with gates
Accessibility	Dirt path or road, unsuitable for trucks, accessible with (4WD) car

Table 4 - Site Geographical Setting

Site Geographical Setting	
Potential natural disasters	Hurricanes, floods

Site Geographical Setting	
Proximity to a chemical factory, flammable materials storage or other industrial hazard	Yes, within 500 m
Proximity to residential area	Yes, within 500 m
Proximity of public facilities within 500 m	Government offices
Proximity of groundwater wells within 250 m	Unknown
Proximity of open water within 500 m	No
Proximity of crops or pastures within 250 m	Yes
Proximity of Food or Feedstuff Storage within 250 m	Yes
Location within Recreational Area or National Park	Yes

Figure 1. Map with Geographical Setting of the site



Site Layout

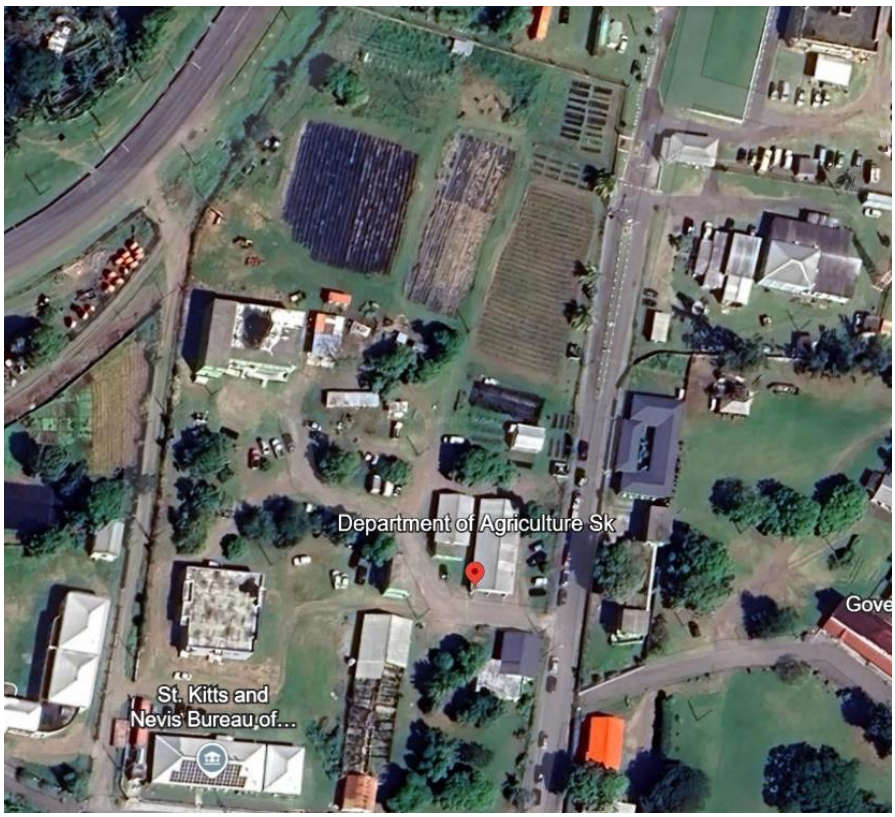


Photo report of the site




PINDSTRUP
SUBSTRATE



KN-02 Long Point Seaport, Nevis Air and Sea Ports Authority, Charlestown, Nevis (17°06'36.0"N 62°37'19.2"W)

The Long Point seaport is the main sea import facility of Nevis, handling container and break-bulk cargo; operations on the site started in 1991. At the time of the inventory the obsolete pesticides – all of them consignments confiscated by Customs on importation – were stored loosely in the front section of an unventilated 40' shipping container, together with other confiscated household goods and general cargo, close to the container doors, so that there was a high risk of spillage whenever the container was opened. The packaging was in moderate to poor condition with visible signs of spillage, and the proximity of the container to the main cargo areas and to daily port operations made the stockpile a potential health hazard through toxic fumes. After the inventory the port staff removed all the pesticides from the container and placed them in a separate room at the port, away from the high-traffic areas. The Port Authority has since agreed to purchase a prefabricated storage shed to serve as a dedicated, ventilated pesticide store.

Comments from the Independent Supervisor: Two of the twelve entries are not pesticides: 18.184 l of Clorox Pool and Spa Algicide and Clarifier, a poly-quaternary ammonium algicide recorded as corrosive, and 5.4 kg of Scotts Turf Builder grass seed with sun and shade mix, of unknown composition - together 23.6 kg/l, or 26 % of the site total. Both were confiscated by Customs on importation and are held with the pesticides. Their classification should be confirmed before work commences as they are not obsolete pesticides and therefore would not be within the scope of this activity.

Table 5 - Inventory List of relevant Waste Streams at the Site

Type of waste	Description	Condition of Packaging	No. of packaging	Type of packaging	Quantity (kg/l)
Obsolete pesticides	Household and garden insecticides – Ortho Home Defense Insect Killer (bifenthrin / zeta-cypermethrin), Real Kill Termite Killer (lambda-cyhalothrin), Spectracide Fire Ant Shield Mound Destroyer (lambda-cyhalothrin), Pest Shield Ant Killer Powder (permethrin), Raid Ant & Roach Killer (cypermethrin / imiprothrin), Monterey Bt (Bacillus thuringiensis kurstaki)	Poor to good	21	Plastic bottles and bags, metal aerosol cans (0.4–5 l / kg)	32.7
Obsolete pesticides	Professional insecticide concentrate – MasterLine Kontrol 30-30 for flies, mosquitoes and gnats (permethrin 30 % / piperonyl butoxide 30 %)	Good	2	Plastic bottle (11.4 l)	22.7

Type of waste	Description	Condition of Packaging	No. of packaging	Type of packaging	Quantity (kg/l)
Obsolete pesticides	Herbicides – Ortho Ground Clear Weed and Grass Killer (ammonium nonanoate), Roebic Foaming Root Killer (dichlobenil)	Good	8	Plastic bottles and bags (0.45–3.79 l)	10.3
Other chemicals	Clorox Pool and Spa Algicide and Clarifier (poly-quaternary ammonium 6 %); recorded as corrosive	Moderate	4	Plastic bottle (4.5 l)	18.2
Other chemicals	Scotts Turf Builder Grass Seed Sun and Shade Mix; composition unknown	Poor	1	Plastic bag (5.4 kg)	5.4
Total					**89.3**

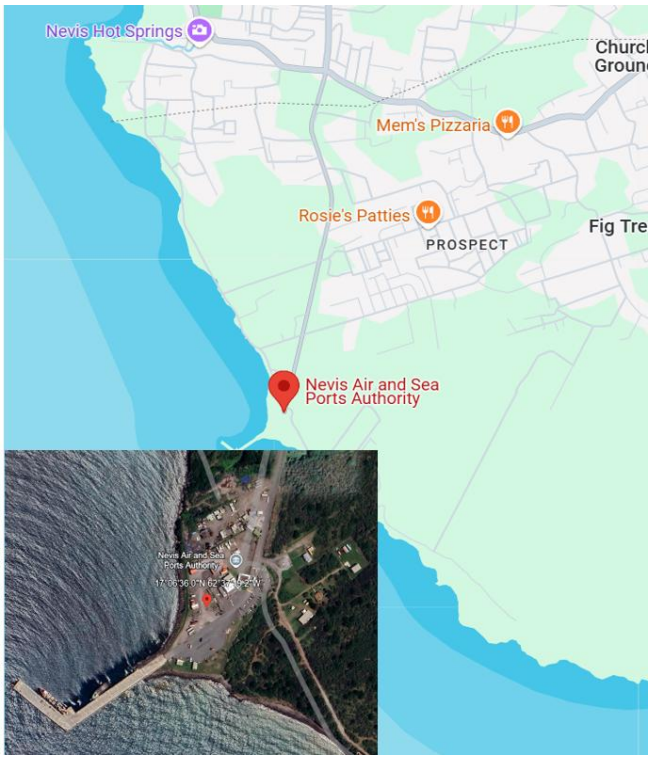
Table 6 – Site conditions

Site conditions	
Status of stored waste	Limited signs of spills
Building conditions	Good, no major signs of damage
Floor conditions	Concrete floor in good condition
Site control	Yes, (partially) fenced with gates
Accessibility	Good quality asphalt, suitable for trucks

Table 7 – Site Geographical Setting

Site Geographical Setting	
Potential natural disasters	Hurricanes, earthquakes
Proximity to a chemical factory, flammable materials storage or other industrial hazard	Yes, within 500 m
Proximity to residential area	Yes, within 500 m
Proximity of public facilities within 500 m	Nevis Athletic Stadium
Proximity of groundwater wells within 250 m	No
Proximity of open water within 500 m	Yes, sea
Proximity of crops or pastures within 250 m	No
Proximity of Food or Feedstuff Storage within 250 m	Yes
Location within Recreational Area or National Park	Yes

Figure 2. Map with Geographical Setting of the site



Site Layout



Photo report of the site







KN-05 Department of Agriculture, Prospect Estate, Nevis (17°07'30.0"N 62°36'32.4"W)

The Department of Agriculture of the Nevis Island Administration has been active at Prospect Estate since 1950. Only minor quantities of obsolete pesticides are held there, kept in a wooden cupboard in a building that also houses a laboratory and offices. Several of the products are old and held in glass bottles with degraded labels, and one bottle could not be identified at all; the stock includes 0.5 l of dicofol, a POP substance listed under the Stockholm Convention. The building is of sound concrete construction with a good concrete floor and the compound is partially fenced with gates, but the store lacks ventilation and lighting, and the assessment report recommends that both be upgraded and that the materials be properly labelled and securely stored. The site is reached by a dirt road that is unsuitable for trucks; access is possible with a four-wheel-drive vehicle.

Table 8 - Inventory List of relevant Waste Streams at the Site

Type of waste	Description	Condition of Packaging	No. of packaging	Type of packaging	Quantity (kg/l)
Obsolete pesticides	Herbicides – Prowl 3.3 E (pendimethalin 37.4 %), Ortho Ready-to-Use Weed B Gone (2,4-D and mecoprop dimethylamine salts), Nabu EC (sethoxydim)	Poor to moderate	9	Glass and plastic bottles (0.475–3.78 l)	4.6

Type of waste	Description	Condition of Packaging	No. of packaging	Type of packaging	Quantity (kg/l)
Obsolete pesticides	Insecticides – Actellic 50 EC (pirimiphos-methyl 50 %, flammable), Diazinon 60 %, Dicofol 18 EC, Ortho Volck Oil Spray (petroleum oil), New Bt 2X (Bacillus thuringiensis)	Poor	5	Glass and plastic bottles (0.25–0.5 l / kg)	2.5
Obsolete pesticides	Unidentified product; label illegible	Poor	4	Plastic bottle (0.5 l)	1
Total					**8.1**

Table 9 – Site conditions

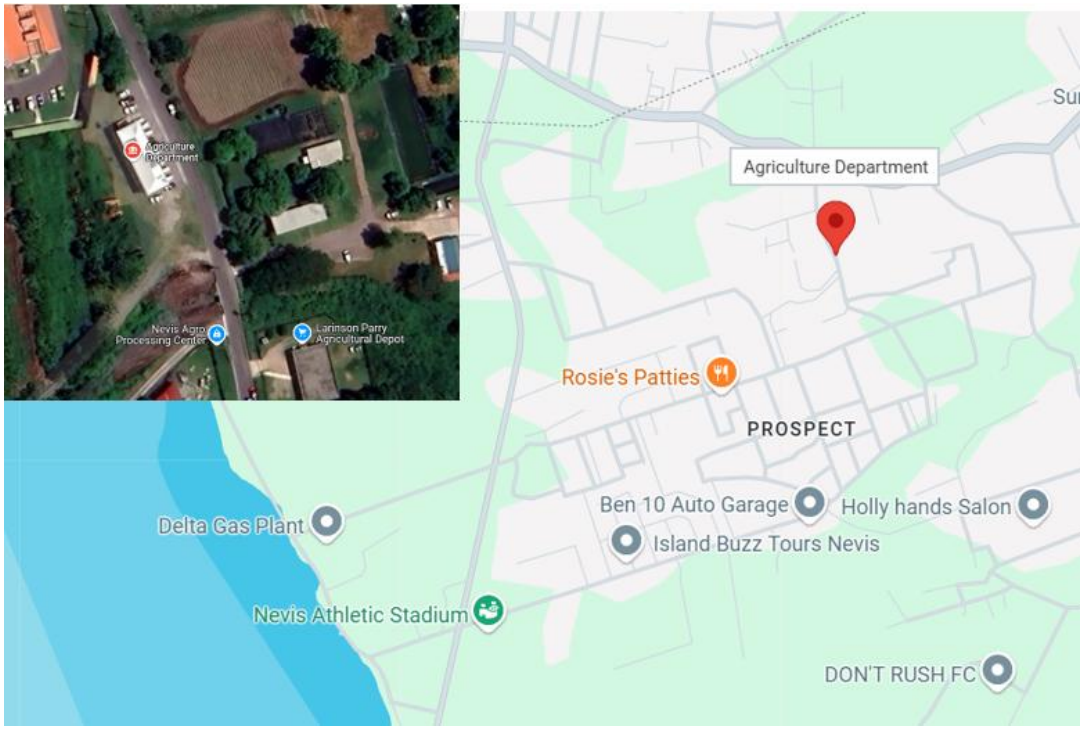
Site conditions	
Status of stored waste	Limited signs of spills
Building conditions	Good, no major signs of damage
Floor conditions	Concrete floor in good condition
Site control	Yes, (partially) fenced with gates
Accessibility	Dirt path or road, unsuitable for trucks, accessible with (4WD) car

Table 10 – Site Geographical Setting

Site Geographical Setting	
Potential natural disasters	Hurricanes, earthquakes
Proximity to a chemical factory, flammable materials storage or other industrial hazard	Yes, within 100 m
Proximity to residential area	Yes, within 500 m

Site Geographical Setting	
Proximity of public facilities within 500 m	Mental hospital
Proximity of groundwater wells within 250 m	No
Proximity of open water within 500 m	No
Proximity of crops or pastures within 250 m	Yes
Proximity of Food or Feedstuff Storage within 250 m	Yes
Location within Recreational Area or National Park	No

Figure 3. Map with Geographical Setting of the site



Site Layout

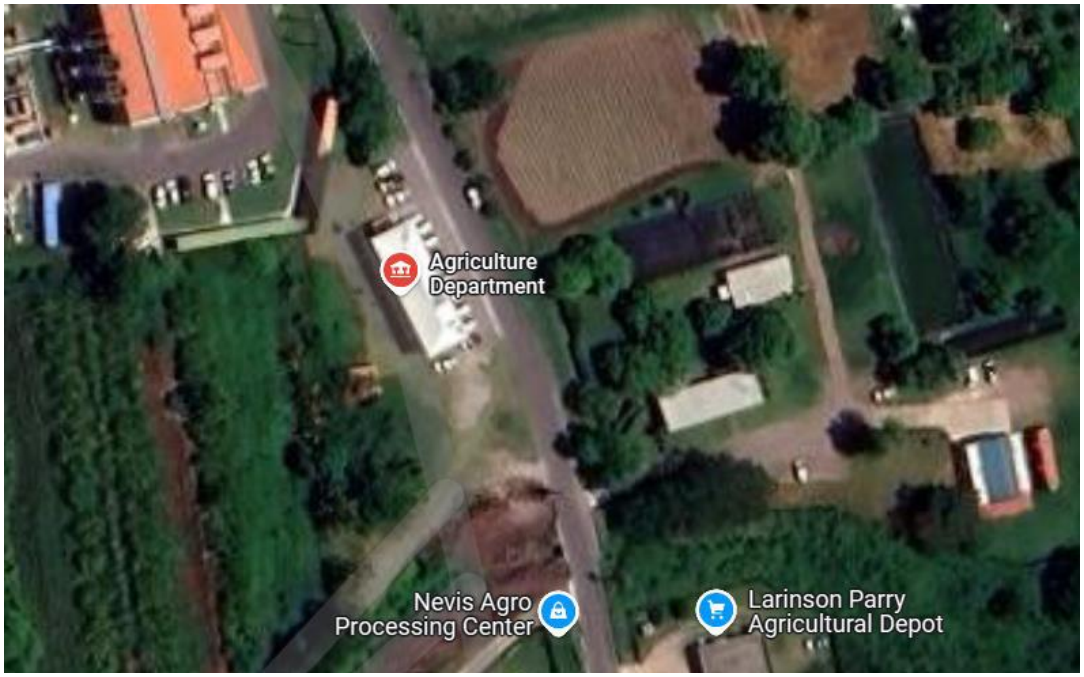


Photo report of the site




PROWL
AGRO CHEMICALS



KN-06 Robert L. Bradshaw International Airport Fire Hall, Saint Kitts Air and Sea Ports Authority (17°18'46.8"N 62°43'12.0"W)

The fire hall of the Robert L. Bradshaw International Airport contains stockpiles of PFAS containing/suspected AFFF both inside and outside of the building in varying conditions; the AFFF stored outside in 20L containers are deteriorating while the stockpiles kept inside and in 208 L drums which are in good condition. The Contractor shall prioritise the transfer of the 400 L AFFF stored outside in severely deteriorating 20 L plastic containers into UN-approved packaging.

Table 9 – Inventory List of relevant Waste Streams at the Site

Type of waste	Description	Condition of Packaging	No. of packaging	Type of packaging	Quantity (l)
AFFF	Lorcon Fluoroprotein Air Foam Liquid Conc 6%	Very poor	17	Plastic	340
AFFF	National Foam Aero-lite 6% AFFF	Very poor	3	Plastic	60
AFFF	Fomtec AFFF 6% ICAO AFFF	Good	11	Plastic	2,200
AFFF	National Foam Centurion 6% AFFF	Moderate	16	Plastic	320
Total					2,920

Table 10 – Site conditions

Site conditions	
Status of stored waste	Limited signs of spills
Building conditions	Good, no major signs of damage
Floor conditions	Concrete, good quality

Site conditions	
Site control	Yes, (partially) fenced with gates
Accessibility	Good quality asphalt, suitable for trucks

Table 11 - Site Geographical Setting

Site Geographical Setting	
Potential natural disasters	Hurricanes
Proximity to a chemical factory, flammable materials storage or other industrial hazard	Yes, within 500 m
Proximity to residential area	No
Proximity of public facilities within 500 m	Airport
Proximity of groundwater wells within 250 m	No
Proximity of open water within 500 m	No
Proximity of crops or pastures within 250 m	No
Proximity of Food or Feedstuff Storage within 250 m	No
Location within Recreational Area or National Park	No

Figure 4. Map with Geographical Setting of the site



Site Layout



Photo report of the site









KN-08 SKELEC, Transmission & Distribution and Generation Sites, Basseterre (17°18'21.6"N 62°42'54.0"W)

The Saint Kitts Electricity Company (SKELEC) has operated the site since 2003 and holds two waste streams relevant to the project. At the rear of the generation plant, discarded mercury-containing light bulbs are kept in drums inside a 40' shipping container: some 4,600 bulbs with no markings, at an estimated 250 g each, about 1,150 kg in all. Streetlamps removed from service – approximately 102 m³ in one and a half forty-foot containers – are stored alongside them; the field inventory describes them as failed LED streetlamps, and the assessment report notes that it is not clear whether mercury-containing bulbs have already been removed from the fittings. **No mercury content has been confirmed for this site**.

Note: On the concrete-paved yard at the rear of the Transmission and Distribution facility stand two old dry transformers removed from the former sugar factory. Both are decommissioned, rusted at the top and internally and drained of all liquid, with a combined weight of 2,515 kg; they are treated as PCB-suspected on account of their age and origin, but no fluid could be detected in either unit and no Chlor-N-oil test could therefore be performed. Storage across the site is neat and orderly, the site is controlled by cameras, fencing and barbed wire, and it is reached on good-quality asphalt.

Table 14 - Inventory List of relevant Waste Streams at the Site

Type of waste	Description	Condition of Packaging	No. of packaging	Type of packaging	Quantity (kg/l)
MAPs (additional waste)	Discarded mercury-containing light bulbs with no markings, used and discarded in operations; approximately 4,600 units at a typical weight of 250 g each	Used and discarded	≈ 4,600	Drums inside a 40' shipping container	1,150
MAPs (additional waste)	Failed LED street lamps removed from service; approximately 102 m³; residual mercury-lamp content in the fittings not established	Discarded	–	1.5 × 40' shipping container	NA
PCBs	two old dry transformers	Poor	2		2,515
Total MAPs					**3,665**

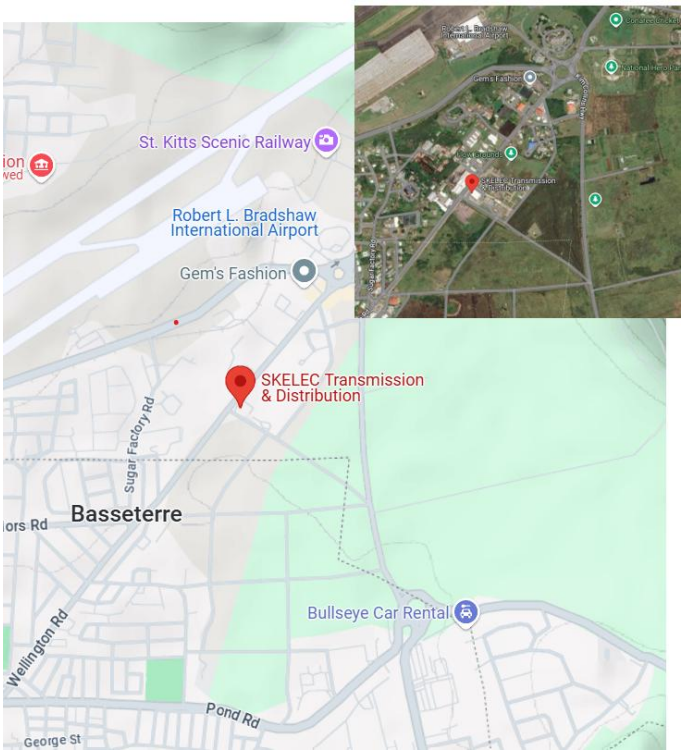
Table 15 - Site conditions

Site conditions	
Status of stored waste	No signs of spills
Building conditions	Good, no major signs of damage
Floor conditions	Concrete floor in good condition
Site control	Yes, cameras, barbed wire, fencing and other border control
Accessibility	Good quality asphalt, suitable for trucks

Table 16 - Site Geographical Setting

Site Geographical Setting	
Potential natural disasters	Hurricanes, earthquakes
Proximity to a chemical factory, flammable materials storage or other industrial hazard	Yes, within 500 m
Proximity to residential area	Yes, within 500 m
Proximity of public facilities within 500 m	Other businesses
Proximity of groundwater wells within 250 m	Unknown
Proximity of open water within 500 m	No
Proximity of crops or pastures within 250 m	No
Proximity of Food or Feedstuff Storage within 250 m	No
Location within Recreational Area or National Park	No

Figure 5. Map with Geographical Setting of the site



Site Layout



Photo report of the site







KN-09 Caribbean Agricultural Research and Development Institute (CARDI), Bird Rock, Basseterre (17°17'55.0"N 62°43'38.0"W)

The CARDI country office occupies a residential house at Brumaire, Bird Rock, in Basseterre, which has been converted into offices; activities on the site started in 2016. The obsolete pesticides are held in a designated room within the office, inside cupboards fitted with locks and access control to prevent unauthorised entry, and protected from direct sunlight, extreme weather and flooding. The products are in their original containers with intact labels and are generally in good to moderate condition with no evidence of spillage; one bottle carries a faded label and could not be identified. The building is of sound concrete construction with a tiled concrete floor in good condition, the whole area is properly fenced with a secure gate, and the storeroom is easily accessible.

Comments from the Independent Supervisor: Regarding the composition of this stockpile: four of the six products - Cure (abamectin), NaturalisL (Beauveria bassiana), Radiant (spinetoram) and Entrust (spinosad) - carry the comment "biological insecticide use for IPM" in the field list, which suggests that they may be current rather than obsolete stock and their status should be confirmed before inclusion.

Table 17 – Inventory List of relevant Waste Streams at the Site

Type of waste	Description	Condition of Packaging	No. of packaging	Type of packaging	Quantity (kg/l)
Obsolete pesticides	Fungicide – Acrobat MZ 69 WP (dimethomorph 9 % / mancozeb 60 %)	Moderate	6	Plastic bag (0.4 kg)	2.3

Type of waste	Description	Condition of Packaging	No. of packaging	Type of packaging	Quantity (kg/l)
Obsolete pesticides	Biological insecticides – Cure (abamectin 1.8 %), NaturalisL (Beauveria bassiana ATCC 74040), Radiant (spinetoram 11.7 %), Entrust (spinosad 30 %)	Good to moderate	4	Plastic bottles (0.2–3.8 l / kg)	5.3
Obsolete pesticides	Unidentified product in a commercial bottle; label faded	Poor	1	Plastic bottle (0.5 l)	1
Total					**8.6**

Table 18 – Site conditions

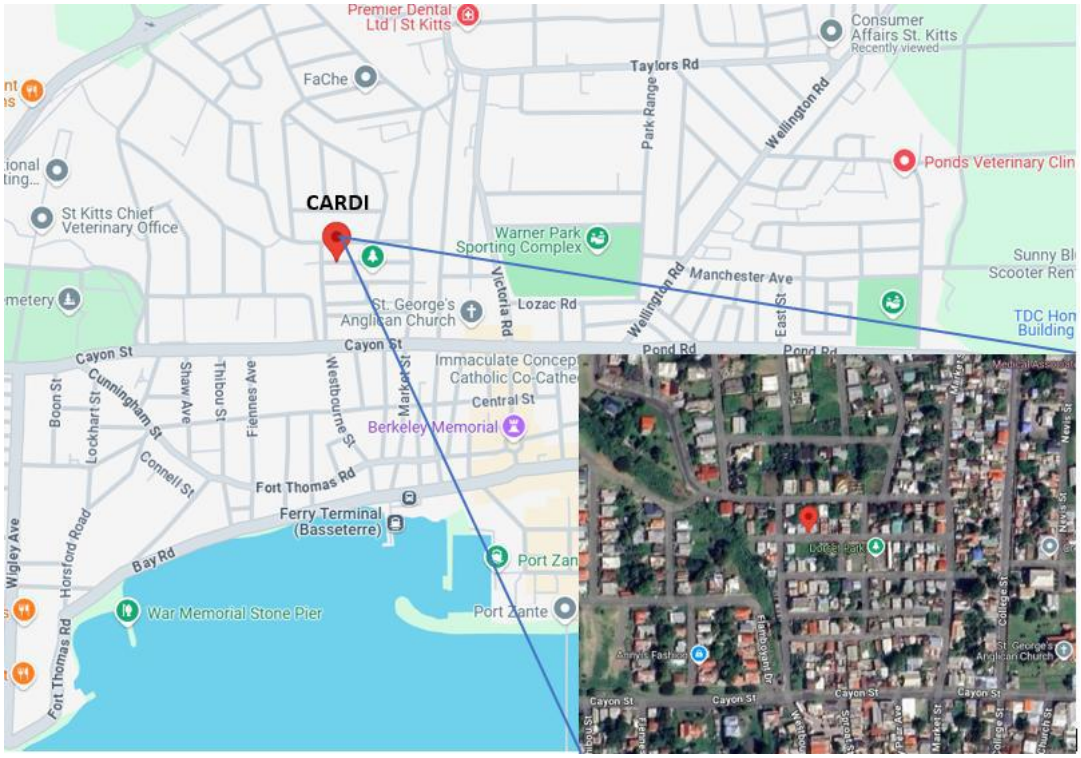
Site conditions	
Status of stored waste	Generally stored in good to moderate condition; no evidence of spillage
Building conditions	Sturdy concrete building and storeroom in good condition
Floor conditions	Concrete floor with tiles in good condition
Site control	Yes, the whole area is properly fenced with a secure gate
Accessibility	Good access to and from the storeroom

Table 19 – Site Geographical Setting

Site Geographical Setting	
Potential natural disasters	Hurricanes, floods, earthquakes

Site Geographical Setting	
Proximity to a chemical factory, flammable materials storage or other industrial hazard	No
Proximity to residential area	Yes, within 100 m
Proximity of public facilities within 500 m	Yes
Proximity of groundwater wells within 250 m	Unknown
Proximity of open water within 500 m	No
Proximity of crops or pastures within 250 m	No
Proximity of Food or Feedstuff Storage within 250 m	No
Location within Recreational Area or National Park	Yes, Kim Collins Athletic Stadium

Figure 6. Map with Geographical Setting of the site



Site Layout



Photo report of the site

