



4 May 2020

Recycling & Recovery

Mr Chris Ritchie
Director – Industry Assessment
Department of Planning, Industry & Environment

Dear Chris

RE: Modification Application for Spring Farm Advanced Resource Recovery Technology Facility (MP 05_0098 MOD 6) – response to EPA request for further information

1.0 Introduction

The purpose of this letter is to provide a response to the request for further information received through the Department of Planning, Industry & Environment (**DPIE**) from the NSW Environment Protection Authority (**EPA**) regarding the consolidated application summary document (**Consolidated Application**) SUEZ provided on 9 March 2020.

2.0 Background

In 2015, SUEZ's Modification 5 (MOD 5) was granted which permitted receipt as well as processing of 530m³ per day of liquid waste and 130,000 tonnes per annum of mixed solid waste classified as inert or solid waste under the Protection of the Environment Operations Act 1997.

In early 2019, SUEZ lodged Modification 6 (MOD 6) application which sought to:

- Provide information to clarify minor operational differences between the original Environmental Assessment and current operations;
- Seek changes to existing consent condition wording to include "industrial liquid waste" as approved waste to be received onsite; and
- Change the site's operational hours

SUEZ received submissions from 5 agencies and 2 members of the public regarding MOD 6, and provided a Response to Submission (RTS) report in July 2019 to address the agency comments. Following an additional round of clarification (RTS addendum submitted 27 September 2019), SUEZ received no further request for information from Sydney Water, Camden Council, Office of Environment and Heritage, and Roads and Maritime Services.

In early 2020, SUEZ sought a meeting with the EPA and DPIE to understand EPA's comments from its submissions (received 18 October 2019 and 11 November 2019) and to address any outstanding issues. The EPA then requested SUEZ submit a Consolidated Application to summarise its application, addressing in one single document all comments raised by EPA in previous correspondences.

In response to EPA's request, SUEZ submitted a Consolidated Application on 17 February 2020 to the EPA which includes a summary of the application and responds to the concerns raised by the EPA in its previous correspondences. On 9 March 2020, SUEZ received additional new questions from EPA. This document aims to address the additional questions raised in EPA's latest correspondence.

3.0 Spring Farm Tank Farm Overview

SUEZ's Spring Farm Tank Farm Biological Treatment located within SUEZ's Spring Farm Advanced Resource Recovery Technology (SF ARRT) Facility is a **highly versatile biological treatment process** and is able to treat a range of liquids of varying composition. Liquids will **only be discharged to licenced facilities** if it meets the **specifications** set by the governing bodies at the licenced facilities.

In addition to the versatility of the equipment, SUEZ has **strict controls** to ensure the waste received is compatible with the treatment process. This was described in the Consolidated Application, with key points summarised below:

- Prior to accepting new customers, SUEZ ask for a test sample and lab results of the liquid waste to ensure they could be processed at our facilities and compatible with other liquid waste received onsite. Liquid waste is collected by SUEZ tankers and there is no self-delivery of liquid waste.
- At site, liquid waste received would be discharged into an initial holding / reception tank. A further sample would be taken by SUEZ employee to ensure the same waste are being delivered as what was originally quoted. If the sampling detects that the delivery has a higher then expected reading, SUEZ will carry out a retest for confirmation and assess whether a change of treatment process is required.
- The facility is operated by trained operators who can manage the liquids on a case by case basis.

The treated industrial liquid from the Tank Farm will be disposed via sewer, governed by **Sydney Water**. SUEZ has lodged an application to Sydney Water for a **Trade Waste Agreement (TWA)**, which will form the governing document describing **discharge limits** and **sampling requirements**. The liquid will then be further treated by Sydney Water at their water treatment plant before final discharge.

SUEZ attaches in Appendix B an e-mail record from Sydney Water which shows confirmation that Sydney Water is currently processing the SUEZ's TWA application. At the time of the email (early March 2020), Sydney Water was planning for a technical specialist inspection of the site, which has unfortunately been delayed due to site visit restrictions associated with COVID-19. We believe this technical inspection of the site by Sydney Water will assist ease the technical concerns of the EPA about the tank farm's ability to treat industrial liquid waste.

For the purpose of the Environment Protection Licence (**EPL**), SUEZ provides in the Table 1 the waste codes of the industrial liquids SUEZ is seeking to receive and treat on site, including examples of its sources and indication of annual tonnages. We note the annual tonnage indications are an estimate only and based on past industrial volumes received at SUEZ's former SUEZ Camellia Resource Recovery Centre, and would vary based on commercial contracts SUEZ is able to secure at the time.

Table 1: Additional waste codes proposed for the Tank Farm

Waste code	Source	Estimated annual tonnage
J100 Waste mineral oil	Various engineering customers and workshops	SUEZ's Camellia Resource Recovery Centre used to treat an average of less than 500 tonnes per annum

Waste code	Source	Estimated annual tonnage
J120 Waste oil / hydrocarbons	Airport contract, services contracts with gas infrastructure companies and workshop	Approx. 5,000 tonnes per annum
K110 Grease trap waste	SUEZ customer base of restaurants and shopping centres	Approx. 15,000 tonnes per annum
M250 Surface activity agents	Sydney airports and airport operations such as plane washing and manufacturing customers	Approx. 5,000 tonnes per annum
F100 Waste inks and dyes	Various SUEZ customers such as printers, box manufacturers	SUEZ's Camellia facility used to treat an average of less than 500 tonnes per annum
N140 Fire debris and fire wash waters	SUEZ treatment of fire wash waters from SUEZ sites as required	Less than 1000 tonnes per annum however dependant on fire incidents
N205 Residuals from industrial waste treatment / disposal	Wash waters from industrial sites contaminated with low level contaminates	Less than 500 tonnes per annum
T120 Photographic chemicals and processing waste	Schools and universities	Less than 500 tonnes per annum
F110 Waste resin and latex	Manufacturing customers of SUEZ	Less than 500 tonnes per annum
N190 Filter cake (note this is a solid waste, but include as it has its own waste code)	Industrial waste customers of SUEZ with industrial facilities with manufacturing and Generated at the facility*	Less than 500 tonnes per annum

*This is updated for clarity in response to EPA's question (question 23 below)

4.0 Response to EPA questions its letter dated 9 March 2020

In its letter (attached in Appendix A), the EPA lists multiple questions in dot points in between its commentary. SUEZ has translated the dot points to question numbers to ensure we respond to every question. Our responses to **EPA's questions** are in blue.

Q1 The source sites and activities occurring at the premises that would likely affect the characteristics of all influent liquids - eg. will the M250 surface active agents be limited to detergent based wash waters from cleaning aircraft? What are the likely contaminants? Will the N140 fire wash waters be limited to those generated from SUEZ municipal waste facilities?

SUEZ understands the characteristics of influent liquids is variable. SUEZ's tank farm biological treatment process consists of Upflow Anaerobic Sludge Blanket Reactors (UASB) and Sequencing Batch Reactors (SBRs), which are highly versatile biological treatment processes and can treat a range of industrial liquids with varying composition.

The key guiding principal as to whether SUEZ will accept the liquid is the impact the liquid will have on the treatment bacteria in the tank farm. As an example, before accepting a new customer, we will request testing data from the customer and survey the customer to understand their source site and activities, and if the liquid waste they produce is compatible with the treatment process. An example of non-compatible is if the source

includes biocides. If biocides are used (such as for food processing equipment cleaning), SUEZ will not accept the liquid as the biocides will harm the bacteria in the tank farm which affects the treatment process. In addition to strict customer selection, SUEZ's trained operators based on site will assesses each liquid waste type on a case by case basis to make sure the treatment is optimised to treat the liquid to meet the discharge limits set by downstream licenced facilities.

This process is very similar to SUEZ's former operations at our Camellia Resource Recovery Centre, where a range of industrial liquids of varying composition were received and successfully treated using an SBR process.

Q2 The physical and chemical characteristics of conforming liquids eg. pH range for N140 fire wash water liquids

As mentioned, the biological treatment process is highly versatile. In general, the bacteria in the SBR and UASB operates best between pH 6.5 – pH 9, however can function in more extreme conditions as low as pH 4.

SUEZ will assess each liquid waste type on a case by case basis to optimise the biological treatment conditions as we will receive laboratory data for the liquids before they arrive on site. Industrial liquids that do not fall in the optimum range will be assessed on a case by case basis to understand whether they can still be treated. For this particular example raised by the EPA, if the waste sample and lab data suggest extreme high or low pH ranges, our trained operators will add dosing chemical to regulate the pH, to optimise the conditions for the biological treatment process.

Q3 Will any of the industrial liquids trigger hazardous waste classifications?

No, the SF ARRT facility is not licenced to accept hazardous waste. Any waste classified as hazardous would not be accepted on site.

Q4 Identification, limits, handling and disposal of non-conforming liquids and contaminants

As mentioned in the Consolidate Application, prior to accepting new customers, SUEZ typically ask for a test sample of the waste to ensure they could be processed at our facilities.

At site, liquid waste received would be discharged into an initial holding / reception tank. A sample would be taken by SUEZ employee to ensure the same waste are being delivered as what was originally quoted. If the sampling detects that the delivery has a higher than expected reading, SUEZ will carry out a retest for confirmation and assess whether a change of treatment process is required.

Liquid waste is collected by SUEZ tankers from our customers and there is no self-delivery of liquid waste. This reduces the risk of non-conforming liquids and contaminants received at the tank farm.

Q5 The types and amounts of reagents required and any potential associated hazards.

As mentioned in the Consolidated Application, bulk reagents are managed, stored and handled within the liquid treatment plant with additional bunding reflective of reagent type. Bunds are kept clear of spills and debris. Any rainwater that contributes to the banded area is tested prior to removal and relocation to appropriate tank for treatment. Visual inspections are conducted through the day to ensure integrity of both the bunds and reagent vessels.

Reagent chemicals, along with other potential pollutants are recorded in SUEZ's Pollution Incident Response

Management Plan (PIRMP) provided as part of the Consolidated Application under the section *Inventory of potential pollutants on site*. Chemical registers are also kept on site in accordance with SUEZ's *Hazardous Chemicals (incl. Dangerous Goods) Standard Operating Procedure*.

SafeWork NSW also regulates the safe storage of chemicals on site. A copy of SUEZ's Notification of Hazardous Chemicals on Premise provided to SafeWork NSW which describes the limits for hazardous chemicals (including reagents) allowed on site is provided in Appendix C to this document. If there are any changes or increases to these limits, their quantities will need to be approved.

Q6 Demonstrate that the treatment plant is appropriate for each of the proposed liquids

As mentioned in our response to Q1, the SF tank farm process is very similar to SUEZ's former operations at our Camellia Resource Recovery Centre, where a range of industrial liquids of varying composition were received and treated using an SBR process. This technology is proven to treat the industrial liquids sought by SUEZ in our EPL modification application as they were previously accepted and successfully treated at the Camellia site.

The appropriateness of the technology will be further confirmed by Sydney Water, the receiver of the treated liquids discharged via sewer. As mentioned, SUEZ has applied for a Trade Waste Agreement from Sydney Water. Sydney Water is currently processing the application and was arranging an appointment for a technical specialist inspection of the site with SUEZ, which unfortunately was delayed due to COVID-19 and travel restrictions. We attach in Appendix B our recent correspondence with Sydney Water.

SUEZ suggests the confirmation from Sydney Water could be a post-approval condition if this application is approved, to further demonstrate to EPA the robustness of the technology and plant appropriateness.

Q7 Plant construction to the appropriate standards for the proposed liquids

Following receiving MOD 6 consent in 2016, SUEZ undertook repairs to the tank farm tanks before we recommissioned the facility. The repairs report could be provided to DPIE/EPA upon request.

Q8 The volume limits for the receipt, storage, processing and disposal of each of the received liquids and the total of received liquids at any one time

SUEZ is not seeking to change any volume limits for the receipt, storage, processing of the liquid waste. MOD 5 consent allows 520m³ per day of Liquid Waste comprising liquid organic waste and leachate. The sought industrial liquids will be included as part of the 520m³ per day limit.

In SUEZ's TWA application to Sydney Water, we sought a maximum discharge rate of 6 l/s for treated liquids.

Q9 The treatment rate of each component of the process

The treatment rate varies based on the biological environment of the treatment tank, input liquid waste composition mix and other factors such as climate and temperature. It is difficult to provide specific treatment rates for each component of the process.

As an indication, two SBRs on site has an operational cycle of 4 hours (2 h feed & aeration / 1h settling / 1h decanting) and one of the SBRs has an operational cycle of 8 hours (4 h feed & aeration / 2 h anoxic / 1h settling / 1h decanting). These operational cycles could be varied based on the liquid waste composition to ensure the

liquids are treated to the required specifications.

Q10 Liquid and odour discharge points (eg. from open SBR tanks, the sludge belts, during decanting of vehicles, displacement from filling tanks, decanting of lines and tanks during maintenance) the stages of the process when these will discharge and the associated controls

Liquid and odour discharge points are consistent with what was described in MOD 5. There are no changes to this.

As part of SUEZ's MOD 6 application, SUEZ commissioned ERM to prepare an Odour Assessment dated 4 July 2019. This document was submitted as part of SUEZ's Response to Submission in response to an initial request by the EPA. We note in letter dated 18 October 2019 from the EPA that the EPA concluded "*The EPA accepts the MP 05_0098 MOD 6 odour modelling assessment and recommends post-commissioning validation of the odour emissions as a condition of consent.*"

Q11 Potential risks and impacts associated with the mixing of the various proposed liquids and how these risks will be addressed

All incoming liquids will initially be added to the buffer tank. Due to the relative ratios (an average tanker truck with capacity of approximately 22 tonnes (approximately 22 kilolitres) will only be able to discharge a relatively small amount of liquids into the 1000 kilolitre buffer tank at one time), there is low risk and impact associated with mixing of liquids.

In addition, as mentioned in our response to Q4, SUEZ has control and visibility of the incoming liquids and what are in the tanks at any particular time.

Q12 The expected maximum and estimated average volume of liquids to be treated annually

As mentioned in our response to Q8, SUEZ is not seeking to change any volume limits, which is currently set at a combined receipt and processing volume limit of 520m³ per day of liquid waste.

Assuming operations over 52 weeks, 6 days a week, the expected maximum is around 162,000 m³.

Q13 The proposed/expected maximum and average flow rates through each treatment system

As mentioned in our response to Q9, treatment rate across each equipment highly varies based on process, input liquid waste and other factors. It is difficult to provide specific values.

The sewer discharge rate with Sydney Water is capped at 6 l/s.

Q14 The likely treatment duration, or factors that may affect treatment duration and effectiveness

Please refer Q9.

Q15 How and where the reagents will be stored, transferred and handled, including what controls (bundling etc) are required and will be implemented to ensure operations will be conducted in an environmentally sound manner

As mentioned in the Consolidated Application and our response to Q5, bulk reagents are managed, stored and handled within the liquid treatment plant, on additional bunding reflective of reagent type. Bunds are kept clear of spills and debris. Any rainwater that contributes to the bunded area is tested prior to removal and relocation to appropriate tank for treatment. Visual inspections are conducted through the day to ensure integrity of both the bunds and reagent vessels.

In addition to our controls, in our Consolidated Application SUEZ provided a copy of the Emergency Response Plan and Pollution Incident Response Plan to provide comfort that we have controls in the event of spills or other incidents.

Q16 Description, specifications, rates, volumes and disposal pathways of all wastes/by-products discharged from the plant, including but not limited to the treated water specifications and Trade Waste discharge agreement with Sydney Water

Sydney Water is currently processing SUEZ's TWA application and will then provide description, specifications, rates, volumes for the treated liquid to be disposed to sewer. As a guide, Sydney Water's *Acceptance standards and charging rates for 2019-2020* is provided in Appendix D which describes acceptance standards for industrial customers. The final TWA will dictate the final treated water specification, and SUEZ has applied for a sewer disposal rate of 6 l/s.

If not disposed to sewer via TWA, it is a legal obligation for all waste generators including SUEZ, that any waste generated on site is disposed to licenced facilities considering the EPA's *Waste Classification Guidelines*.

Q17 How each waste stream will be managed, including how each waste will be stored, handled, transferred, processed, collected and disposed of

Treated liquids will be stored in the tank farm tanks and discharged to sewer per the conditions of the TWA by Sydney Water.

The residual of the tank farm processed liquid generated by the biological process is dewatered filter cake. The filter cake will be subject to the EPA's *Waste Classification Guidelines* and classified accordingly. SUEZ is currently considering disposal of the filter cake at SUEZ's Elizabeth Drive Landfill (Restricted Waste), unless the classification meets criteria for general waste.

Q18 Will any of the effluent liquids or other by-products be recovered for reuse (eg. the hydrocarbon and/or oily fraction/s of the J100, J120 and K110 liquids)?

This is currently not the intention. However, once the plant is in operation, SUEZ will explore viable alternatives to send by-products to licenced recovery facilities if feasible. SUEZ will only send waste to licenced and legal resource recovery facilities for genuine recovery consistent with the waste hierarchy principles.

Q19 The type and level of sampling and analysis to which influent and effluent liquids will be subjected

In order to confirm the incoming liquid is indeed the liquid quoted by the customer, standard sampling for influent liquids include:

- Heavy metal
- BOD
- COD

- pH
- Conductivity

Additional tests may be undertaken on a case by case basis pending the waste source.

Effluent liquid sampling will be based on TWA with Sydney Water. As a guide, Sydney Water's Acceptance standards and charging rates for 2019-2020 is provided in Appendix D which describes acceptance standards for industrial customers which dictates the sampling and analysis required.

Q20 Will any of the waste liquids or waste solids trigger hazardous waste classifications?

Waste liquids are not classified as hazardous waste, and any solid waste disposed offsite will be subject to the EPA's Waste Classification Guidelines that apply to any waste generators.

The residual of the tank farm processed liquid generated by the biological process is dewatered filter cake. The filter cake will be subject to the EPA's *Waste Classification Guidelines* and classified accordingly. SUEZ is currently considering disposal of the filter cake at SUEZ's Elizabeth Drive Landfill (Restricted Waste), unless the classification meets criteria for general waste.

Q21 Contingency measures, for relevant likely and potential scenarios, including where the treatment fails.

As mentioned in the Consolidated Application, regarding contingency measures for relevant scenarios, SUEZ has prepared an Emergency Response Plan (ERP) and a Pollution Incident Response Management Plan (PIRMP) for the site. A copy of these documents was provided in the Consolidated Application.

In the unlikely scenario where the liquid is not treated to the required specification that can be discharged, SUEZ will need to run the SBR and UASB process again, potentially adjusting the bacteria culture in the mix. As there is a fixed capacity for the tanks and how much SUEZ can receive and process, this will limit the liquid waste SUEZ will be able to receive on site until the liquids are adequately treated.

Q22 EPA requests the applicant provide a risk/hazard matrix including appropriate mitigation measures for the classification, receipt, storage, mixing, treatment and disposal of the influent and effluent liquids and associated reagents.

SUEZ provides a copy of the Hazard Analysis Risk Assessment Report prepared by AXYS Consulting, a specialist risk consultant in Appendix E. This Risk Assessment Report is a post-approval condition for MOD 5.

Q23 Proposed solid wastes - The applicant has also requested receipt of solid waste N190 Filter cake. It is proposed that this will be less than 500 tonnes per annum from industrial facilities with manufacturing. The EPA requests further information regarding this material including; description, waste classification; chemical characteristics; any onsite treatment; maximum amounts received and stored; and the intended disposal methods.

SUEZ does not propose to receive N190 Filter Cake at the tank farm. This is now clarified in the table in Section 3 of this report. SUEZ currently does not generate a representative Filter Cake to be able to provide the information requested by the EPA, as we are not receiving the proposed industrial liquids. As mentioned in our response to Q14, any waste, including filter cake will be subject to the EPA Waste Classification guidelines and classified accordingly. Currently, SUEZ is considering dispose of the filter cake to Elizabeth Drive Landfill (Restricted Waste), unless the waste classification per the guidelines confirms the waste is not restricted waste.

Q24 Odour Impact Assessment

The EPA noted in its letter that *“No Odour Impact Assessment has been provided to support the proposed modification”* and refers to the Pacific Environmental Spring Farm Advanced Resource Recovery Technology (ARRT) Air Quality and Odour Impact Assessment (SFARRT MOD5 OIA) dated 23 September 2013.

SUEZ has in fact provided an Odour Impact Assessment prepared by ERM dated 4 July 2019 as part of SUEZ's Response to Submission. This Odour impact Assessment was originally requested by the EPA in its first set of comments regarding MOD 6 (letter from EPA dated 21 March 2019).

We understand the EPA has already reviewed the Odour Impact Assessment, as in its further correspondence to SUEZ in response to SUEZ's RTS (letter from EPA dated 14 August 2019), EPA questioned an assumption around the applied specific odour emission rate. This was responded by SUEZ in our subsequent addendum to the RTS (27 September 2019). We note in letter dated 18 October 2019 from the EPA that EPA concluded *“The EPA accepts the MP 05_0098 MOD 6 odour modelling assessment and recommends post-commissioning validation of the odour emissions as a condition of consent.”*

SUEZ seeks guidance from DPIE and EPA on why in EPA's latest letter dated 9 March 2020 there is the claim that no Odour Impact Assessment has been provided to support the proposed modification, and a reference to the dated 2013 Odour Assessment associated with MOD 5. SUEZ has in good faith engaged with EPA multiple times to understand EPA's concern, and has committed resources to provide multiple rounds of additional information with the aim of addressing EPA's concerns. We hope our efforts will be able to assist EPA undertake a fair and effective assessment of this proposal which we believe will provide an additional service to the NSW community in regards to liquid waste treatment, making up for the lost capacity due to the closure of the Camellia Resource Recovery Centre.

Q25 Hazard Identification and Risk Assessment - the applicant should consider whether the proposed processing of Industrial Liquid Wastes at the premises triggers the requirements for assessment in accordance with State Environmental Planning Policy (SEPP) No 33: Hazardous and Offensive Development, and if not provide a statement supporting this assertion.

MOD 5, which includes industrial liquid waste as a sought approval, already included a preliminary risk screening completed in accordance with State Environmental Planning Policy No. 33 – Hazardous and Offensive Development (SEPP 33) and Hazardous and Offensive Development Application Guidelines – Applying SEPP 33 (DOP, 2011a).

This is included in Appendix G of the Environmental Assessment and publicly available online. We note again the MOD 5 originally included receipt of Industrial Liquid Waste.

5.0 Summary

SUEZ hopes the above response to additional EPA questions is sufficient. As mentioned, SUEZ has in good faith engaged with the EPA multiple times to understand EPA's concern, and has committed resources to provide multiple rounds of additional information with the aim of addressing EPA's concerns. EPA officers has also been on site to understand the treatment process.

We understand all other agencies are satisfied with SUEZ's response, including Sydney Water, which will be the authority responsible for the trade waste agreement specification. As mentioned, Sydney Water is currently processing SUEZ's TWA and was in the process of arranging a technical specialist inspection of the site. With the view of satisfy any remaining technical concerns, SUEZ is open to providing feedback to DPIE regarding

the outcomes of our Sydney Water TWA application. If this proposal is approved, we are open to this being conditioned by DPIE.

We believe this proposal will provide a positive service to the NSW community in regards to industrial liquid waste treatment, and will replace the lost treatment capacity due to the closure of SUEZ's Camellia Resource Recovery Centre.

If you have any questions on the above matter, please do not hesitate to contact Kelly Gee, Project Manager, on 0429 808 696.

Yours sincerely,

John Mak
Site Manager

Appendix A – EPA letter dated 9 March 2020

Appendix B – Correspondence with Sydney Water regarding technical inspection

Appendix C - SUEZ's Notification of Hazardous Chemicals on Premise provided to SafeWork NSW

Appendix D - Sydney Water's Acceptance standards and charging rates for 2019-2020

Appendix E - Hazard Analysis Risk Assessment Report

Appendix A – EPA letter dated 9 March 2020



DOC19/952740

Bianca Thornton
Planning Officer
Department of Planning, Industry and Environment
GPO Box 39
Sydney NSW 2000

9 March 2020

Dear Ms Thornton,

EPA Request Further Information Regarding the Modification Application for Spring Farm Advanced Resource Recovery Technology Facility (MP 05_0098 MOD 6) – Consolidated Application Summary Regarding Processing of Industrial Liquid Waste.

I refer to the modification application for Spring Farm Advanced Resource Recovery Technology Facility (**MP 05_0098 MOD 6**) at 20 Barrow Rd Spring Farm (**the Premises**).

On 18 October 2019 the NSW Environment Protection Authority (**EPA**) provided comment (DOC19/889378-1) to the Department of Planning, Industry and Environment (**DPIE**) regarding the proposed modifications to the site operational hours, noise impact assessment, Odour Impact Assessment and the receipt of industrial liquid wastes at the premises. In correspondence DOC19/889378-1 the EPA raised no further concerns regarding the proposal to modify the operating hours and the Noise Impact Assessment.

On 17 February 2020 SUEZ (**the applicant**) provided a consolidated application summary for item 2 of MP 05_0098 MOD 6, being the application to modify consent to allow the processing of industrial liquid wastes at the Premises (**SUEZ' Consolidated Application**). The EPA has reviewed the SUEZ' Consolidated Application and notes it does not provide sufficient detail to allow the EPA to make an adequate assessment. The EPA requests the applicant amend the SUEZ' Consolidated Application to include the following.

Proposed Industrial Liquid Wastes

SUEZ' Consolidated Application describes the Industrial Liquid Wastes as:

- J100 Waste mineral oil – typically less than 500 tonnes per annum sourced from engineering customers and workshops;
- J120 Waste oil / hydrocarbons - Approx. 5,000 tonnes per annum from airports, services contracts with gas infrastructure companies and workshops;
- K110 Grease trap waste - Approx. 15,000 tonnes per annum from restaurants and shopping centres;
- M250 Surface activity agents - Approx. 5,000 tonnes per annum from activities such as plane washing and manufacturing customers;
- F100 Waste inks and dyes - less than 500 tonnes per annum from printers, box manufacturers;

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- N140 Fire debris and fire wash waters - Less than 1000 tonnes per annum dependant on fire incidents at SUEZ sites;
- N205 Residuals from industrial waste treatment / disposal - Less than 500 tonnes per annum of wash waters from industrial sites contaminated with low level contaminants;
- T120 Photographic chemicals and processing waste - Less than 500 tonnes per annum from schools and universities; and
- F110 Waste resin and latex - Less than 500 tonnes per annum from manufacturing customers of SUEZ.

The applicant notes that these limits may vary based on customer demand.

Industrial liquid wastes can be highly variable in nature, depending on factors such as the source, prior use/treatment, type, etc. The EPA requests the applicant provide further information regarding the Industrial Liquid Wastes including:

- The source sites and activities occurring at the premises that would likely affect the characteristics of all influent liquids - eg. will the M250 surface active agents be limited to detergent based wash waters from cleaning aircraft? What are the likely contaminants? Will the N140 fire wash waters be limited to those generated from SUEZ municipal waste facilities?
- The physical and chemical characteristics of conforming liquids eg. pH range for N140 fire wash water liquids;
- Will any of the industrial liquids trigger hazardous waste classifications?
- Identification, limits, handling and disposal of non-conforming liquids and contaminants; and
- The types and amounts of reagents required and any potential associated hazards.

EPA requests the applicant provide further information regarding the treatment system including:

- Demonstrate that the treatment plant is appropriate for each of the proposed liquids;
- Plant construction to the appropriate standards for the proposed liquids;
- The volume limits for the receipt, storage, processing and disposal of each of the received liquids and the total of received liquids at any one time;
- The treatment rate of each component of the process;
- Liquid and odour discharge points (eg. from open SBR tanks, the sludge belts, during decanting of vehicles, displacement from filling tanks, decanting of lines and tanks during maintenance) the stages of the process when these will discharge and the associated controls;
- Potential risks and impacts associated with the mixing of the various proposed liquids and how these risks will be addressed;
- The expected maximum and estimated average volume of liquids to be treated annually;
- The proposed/expected maximum and average flow rates through each treatment system;
- The likely treatment duration, or factors that may affect treatment duration and effectiveness;
- How and where the reagents will be stored, transferred and handled, including what controls (bundling etc) are required and will be implemented to ensure operations will be conducted in an environmentally sound manner;
- Description, specifications, rates, volumes and disposal pathways of all wastes/by-products discharged from the plant, including but not limited to the treated water specifications and Trade Waste discharge agreement with Sydney Water;
- How each waste stream will be managed, including how each waste will be stored, handled, transferred, processed, collected and disposed of;
- Will any of the effluent liquids or other by-products be recovered for reuse (eg. the hydrocarbon and/or oily fraction/s of the J100, J120 and K110 liquids)?
- The type and level of sampling and analysis to which influent and effluent liquids will be subjected;
- Will any of the waste liquids or waste solids trigger hazardous waste classifications?
- Contingency measures, for relevant likely and potential scenarios, including where the treatment fails.

EPA requests the applicant provide a risk/hazard matrix including appropriate mitigation measures for the classification, receipt, storage, mixing, treatment and disposal of the influent and effluent liquids and associated reagents.

Proposed solid wastes

The applicant has also requested receipt of solid waste N190 Filter cake. It is proposed that this will be less than 500 tonnes per annum from industrial facilities with manufacturing. The EPA requests further information regarding this material including; description, waste classification; chemical characteristics; any onsite treatment; maximum amounts received and stored; and the intended disposal methods.

Odour Impact Assessment

No Odour Impact Assessment has been provided to support the proposed modification. For the following reasons, the EPA recommends the applicant provide a further Air Quality and Odour Impact Assessment in accordance with the EPA's *Approved Methods and Guidance for the Modelling and Assessment of Air Pollutants in NSW*. This odour assessment should include emissions relevant to the Industrial Liquid Wastes, such as comparable data from the SUEZ Camellia plant or other such facility.

The applicant provided the Pacific Environmental *Spring Farm Advanced Resource Recovery Technology (ARRT) Air Quality and Odour Impact Assessment (SFARRT MOD5 OIA)* dated 23 September 2013 in support of MP 05_0098 MOD 5. The SFARRT MOD5 OIA includes modelling of odour, NO² and dust emissions likely generated at the premises during the destruction of soft drink, alcohol, organic liquid waste, leachate and potentially Industrial Liquids. The character of those industrial liquids was not provided in enough detail for the EPA to make an adequate assessment.

The odour modelling of the liquid waste treatment process emissions in SFARRT MOD5 OIA relied upon emission samples collected from greenwaste derived leachate ponds (page 16 Table 6.1 Measured Odour Emission Rates from Each Operation). The proposed industrial liquids types F100, F110, J100, J120, M250, N140, N205, and T120 are typically derived from petroleum-based materials and will have a significantly different type of air emission and odour profile to green waste leachate.

The modelling in SFARRT MOD5 OIA did not assess the variety of potential odour impacts associated with the Industrial Liquid Wastes, eg. volatile organics VOC's.

SFARRT MOD5 OIA acknowledges that compliance with the modelled 2 odour unit limit as per its approval will not always ensure compliance with s129 of the POEO Act. EPA is currently investigating a significant spike in odour complaints allegedly generated at the SUEZ waste premises at Spring Farm. On the 2 March 2020 EPA Authorised Officers identified offsite odour associated with the Spring Farm tank farm (subject of this MOD) that matched the character described by the complainants. Whilst the EPA's investigation continues and includes consideration of other potential sources of the odours as described by the complainants, the receipt of Industrial Liquid Wastes may increase the risk of odour impact to the surrounding residential suburbs.

Hazard Identification and Risk Assessment

The applicant should consider whether the proposed processing of Industrial Liquid Wastes at the premises triggers the requirements for assessment in accordance with *State Environmental Planning Policy (SEPP) No 33: Hazardous and Offensive Development*, and if not provide a statement supporting this assertion.

EPA Recommendation and Questions

The EPA recommends that the issues detailed above must be addressed before an adequate assessment can be made of the proposal being SUEZ' Consolidated Application.

Change in operating hours

The EPA raises no objection to the proposed changes in operating hours requested by the applicant.

Should you have any questions regarding this matter, please contact Damien Rose on 9995 5586.

Yours sincerely

A handwritten signature in black ink, appearing to read 'TW', with a long horizontal flourish extending to the right.

TREVOR WILSON
Unit Head Waste Compliance
Environment Protection Authority

Appendix B – Correspondence with Sydney Water regarding technical inspection

Ng, Carol

From: Ng, Carol
Sent: Friday, 1 May 2020 11:21 AM
To: Ng, Carol
Subject: RE: SUEZ - Spring Farm - TWA

From: SINDHE, SUCHITHA <SUCHITHA.SINDHE@sydneywater.com.au>
Sent: Monday, 16 March 2020 10:19 AM
To: Bradley Elliott <bradley.elliott@cardno.com.au>
Cc: Tsui, Isaac <isaac.tsui@suez.com>; Gee, Kelly <kelly.gee@suez.com>; Mani, Julin <julin.mani@suez.com>;
Mohan, Chandra <chandra.mohan@suez.com>
Subject: RE: SUEZ - Spring Farm - TWA

Hi Brad,

Thank you for your email.

Could you please send me the water meter number on the property? This should be the four letters and four digits (eg. ABCD1234) pressed into the metal rim circling the round glass cover on the face of the meter. I think the number listed in the application form is the reading of water use on the meter. Thanks.

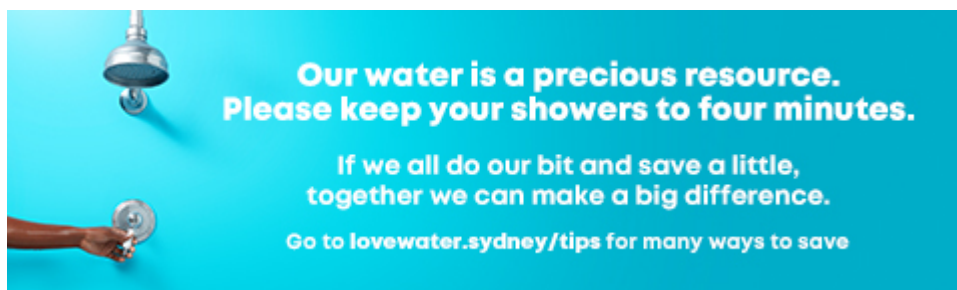
I will commence processing the application and will contact Kelly Gee and Isaac Tsui regarding making an appointment for a technical specialist inspection of the site.

Regards,

Suchitha Sindhe
Business Customer Representative
Customer Services
Gate 0, 33-73 Links Rd, St Marys NSW 2760

Sydney
WATER

Mob 0448 936 098
Suchitha.Sindhe@sydneywater.com.au



From: Bradley Elliott [<mailto:bradley.elliott@cardno.com.au>]
Sent: Thursday, 12 March 2020 1:11 PM
To: SINDHE, SUCHITHA <SUCHITHA.SINDHE@sydneywater.com.au>
Cc: 'Tsui, Isaac' <isaac.tsui@suez.com>; 'Gee, Kelly' <kelly.gee@suez.com>; 'Mani, Julin' <julin.mani@suez.com>;
'Mohan, Chandra' <chandra.mohan@suez.com>
Subject: FW: SUEZ - Spring Farm - TWA

Hi Sucitha,

Suez are nearing completion of the rising main and gravity main extension that will allow them to discharge liquid waste to Sydney Water sewer via a trade waste application. The construction works have around 3 weeks remaining and Suez would like to start using the assets as soon as possible after completing construction. See attached completed trade waste application form and supporting information.

Let me know if you need any further information or have any issues.

Thanks
Brad

Bradley Elliott

MANAGER - WATER INFRASTRUCTURE
PRINCIPAL - WATER INFRASTRUCTURE
CARDNO



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From: SINDHE, SUCHITHA <SUCHITHA.SINDHE@sydneywater.com.au>
Sent: Friday, 27 September 2019 11:06 AM
To: Tsui, Isaac <isaac.tsui@suez.com>
Cc: Gee, Kelly <kelly.gee@suez.com>; Hakam, Mohamed <mohamed.hakam@suez.com>; Mani, Julin <julin.mani@suez.com>; Mohan, Chandra <chandra.mohan@suez.com>
Subject: RE: SUEZ - Spring Farm - TWA

Hi Isaac,

Thank you for your email and the information you have provided. It was a pleasure to see you again and meet Kelly, Mohan, Julin and Mohamed.

For submission with your trade waste application, please test the final effluent from your treatment facility for the substances listed on pages 5 and 6 of the attached application form. In addition, please also analyse for soluble calcium, sodium and magnesium, to determine the suitability of the discharge for irrigation.

Please find below the links to our website for information regarding Consent fees and charges and Acceptance standards and trade waste charges. Please note a sewerage usage charge will also apply to your site.

http://www.sydneywater.com.au/web/groups/publicwebcontent/documents/document/zgrf/mdy3/~edisp/dd_067378.pdf

http://www.sydneywater.com.au/web/groups/publicwebcontent/documents/document/zgrf/mdy3/~edisp/dd_067379.pdf

Please contact me should you need additional information. Thanks.

Regards,

Suchitha Sindhe
Business Customer Representative
Customer Services
Gate 0, 33-73 Links Rd, St Marys NSW 2760



Mob 0448 936 098
Suchitha.Sindhe@sydneywater.com.au



From: Tsui, Isaac [<mailto:isaac.tsui@suez.com>]
Sent: Thursday, 26 September 2019 10:12 AM
To: SINDHE, SUCHITHA <SUCHITHA.SINDHE@sydneywater.com.au>
Cc: Gee, Kelly <kelly.gee@suez.com>; Hakam, Mohamed <mohamed.hakam@suez.com>; Mani, Julin <julin.mani@suez.com>; Mohan, Chandra <chandra.mohan@suez.com>
Subject: SUEZ - Spring Farm - TWA

Hi Suchitha,

Thank you for meeting with us on 24 September.

Please find the name of the people were attended the meeting.

- Kelly Gee – Project Manager
- Chandra Mohan – Project Manager
- Julin Mani – Project Engineer
- Mohamed Hakam – Engineer

Please also find the attached information as requested.

- Approval letter from Sydney Water
- Confirmed email from Sydney Water about discharge hours, discharge day per week, volume, etc.
- Water bill with water meter number EDGH0014

As per our conversation, Camellia facility will be moved to Spring Farm by the end of this year.

It would be much appreciated if you could email me the trade waste testing criteria, information about risk index and fees & charges.

I look forward to hearing from you. Thank again.

Best Regards

Isaac Tsui

Quality and Process Improvement Manager

SUEZ Recycling & Recovery

Australia & New Zealand

—

Tel : +61 (0) 2 9826 3153

Fax: +61 (0) 2 4774 8807

Mob: +61 (0) 409 185 683

Email: isaac.tsui@suez.com



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Appendix C - SUEZ's Notification of Hazardous Chemicals on Premise provided to SafeWork NSW

Appendix D - Sydney Water's Acceptance standards and charging rates for 2019-2020

Industrial customers

Acceptance standards and charging rates for 2019-20

Sydney Water accepts trade wastewater to the wastewater system, if it meets certain acceptance standards.

What are acceptance standards?

Acceptance standards are generally limits to the concentration of substances in composite samples of trade wastewater discharge. For substances that pose a particular health and safety risk, acceptance standards also apply to the concentration of substances in a discrete sample of trade wastewater discharge.

Table 1 lists the acceptance standards for domestic substances, and Table 2 lists those for non-domestic substances. Table 1 also shows the value of the domestic equivalent concentrations in industrial discharges, which we deduct when calculating charges.

IPART has determined that Sydney Water will adjust all trade waste fees and charges from 1 July every year (IPART Determination No 5, 2016). These tables show the prices from 1 July 2019.

Who should do the testing?

Customers must ensure laboratories, registered by the National Association of Testing Authorities (NATA), test the substances specified in their trade waste agreements or permits, for the class of test(s) or specific test(s). You can download the approved analytical methods at sydneywater.com.au.

What are they based on?

Acceptance standards are based on:

- safe levels of substances that may otherwise be a health risk to workers in and around the wastewater system
- safe levels of substances to protect public health
- pollution reduction targets and discharge licence conditions set by the Environmental Protection Authority NSW (EPA NSW)
- the need to protect our assets and treatment processes
- the capability of the wastewater system to transport 'domestic substances', that is, suspended solids, grease and BOD
- concentrations obtainable by using proven pre-treatment technology (the standards do allow for you to trial new technology)
- quality specifications for biosolids and re-use water
- re-use considerations, including the need to provide wastewater that doesn't interfere with re-use treatment processes, or limit re-use opportunities
- national acceptance criteria published as *National wastewater source management guidelines*, July 2008, WSAA.

Table 1: Acceptance standards, domestic equivalents and charging rates for domestic substances

Substance	Acceptance standard (mg/L)	Domestic equivalent (mg/L)	Note	Charging rate (\$/kg)
BOD5 – primary treatment		230	1	$0.318 + (0.137 \times [\text{BOD mg/L}]/600)$
BOD5 – secondary/tertiary treatment		230	1	$2.066 + (0.137 \times [\text{BOD mg/L}]/600)$
Soluble BOD	100	Not applicable	14	$0.318 + (0.137 \times [\text{BOD mg/L}]/600)$
Suspended solids – primary treatment	600	200		0.577
Suspended solids – secondary/tertiary treatment	600	200		1.672
Grease – primary treatment	110	50	2	0.521
Grease – secondary/tertiary treatment	200	50	2	1.597
Nitrogen as TKN – secondary/ tertiary treatment	250	50		1.894
Phosphorus – secondary/ tertiary treatment	50	10		6.792
Ammonia*	100	35	4	-
Sulphate	2,000	50		-
Total dissolved solids (ocean systems, no discharge limitation)	10,000	450	11	-
Total dissolved solids (inland and ocean systems with limitation)	500	450	11	-
Total dissolved solids (inland and ocean systems with advanced treatment to remove TDS)	10,000	450	11	-

* For substances that pose a particular health and safety risk, apply acceptance standards to the concentration of substances in a discrete sample of trade wastewater discharge as well as in composite samples.

Trade waste requirements

- Sydney Water will determine standards for colour and interference with ultra violet disinfection on a system-specific basis.
- There must be no fibrous material in the trade wastewater that we believe could obstruct or block the wastewater system.
- Sydney Water will not accept any wastewater that potentially contains asbestos.
- Non-faecal gross solids must have:
 - a maximum linear dimension of under 20 mm
 - a maximum cross section of 6 mm
 - a quiescent settling velocity of under 3 m/hr.
- Sydney Water will negotiate radioactive material activity rates for wastewater discharge on a site-specific basis.
- The Head of Service Planning and Asset Strategy will determine the acceptance standards for substances other than those listed in this fact sheet.
- Sydney Water does not accept substances (or mixtures of substances) that cannot mix with water.
- Exceeding acceptance standards can adversely impact the beneficial re-use of biosolids and recycled water quality.
- Exceeding acceptance standards can also represent a significant risk to staff safety and the environment.

Table 2 Acceptance standards for non-domestic substances

Substance	Acceptance standard (mg/L)	Note
Acetaldehyde*	5	4
Acetone*	400	4
Aluminium	100	
Arsenic	1	
Barium	5	
Boron	100	
Bromine*	5	4
Cadmium	1	
Chlorinated phenolics	0.05	5

Substance	Acceptance standard (mg/L)	Note
Chlorine*	10	4
Chromium	3	6
Cobalt	5	
Copper	5	
Cyanide*	1	4, 7
Fluoride	20	3
Formaldehyde*	30	4
General pesticides (excludes OC and OP)	0.1	8
Herbicides and defoliants	0.1	
Iron	50	
Lead	2	
Lithium (specified systems only)	10	9
Manganese	10	
Mercaptans	1	
Mercury	0.03	
Methyl Ethyl Ketone*	100	4
Molybdenum	100	
Nickel	3	
Organoarsenic compounds	0.1	
pH*	7-10 units	1
Petroleum hydrocarbons (flammable)*	10	4, 10, 13
• Benzene*	0.1	4
• Toluene*	0.5	4
• Ethylbenzene*	1	4

Substance	Acceptance standard (mg/L)	Note
• Xylene*	1	4
Phenolic compounds (non-chlorinated)	1	
Polynuclear aromatic hydrocarbons	5	
Propionaldehyde*	5	4
Selenium	5	
Silver	5	
Sulphide*	5	4
Sulphite	50	
Temperature*	38° C	1
Thiosulphate	300	
Tin	10	
Uranium	10	
Volatile halocarbons*	1	4, 12
• Chloroform*	0.1	4
• Perchloroethylene*	0.3	4
• Trichloroethylene*	0.1	4
Zinc	5	

* For substances that pose a particular health and safety risk, apply acceptance standards to the concentration of substances in a discrete sample of trade wastewater discharge as well as in composite samples

See notes on the next page.

Want to know more?

- Visit sydneywater.com.au.
- Email businesscustomers@sydneywater.com.au.
- Call 13 20 92 to speak to a business customer representative.

Notes to acceptance standards

1. Sydney Water will introduce acceptance standards for a substance on a sub-system specific basis as determined by:
 - how much the receiving system can transport and treat
 - how corroded the sub-system is
 - how wastewater treatment products will be used.
2. You must not discharge oil, fat or grease into the wastewater system.
3. Fluoride limits don't apply where the customer's wastewater system is connected to a wastewater treatment plant (WWTP) that discharges to the ocean.
4. Acceptance standards also apply to concentrations of ammonia, benzene, bromine, chlorine, cyanide, formaldehyde, petroleum hydrocarbons, sulphide and volatile halocarbons in discrete samples.
5. We will determine acceptance standards for individual chlorinated phenolic compounds on a catchment basis, following pollution reduction targets set by the EPA NSW. The concentration limit is a guide only. We may set lower limits for individual chlorinated phenolic compounds.
6. We don't allow discharge from cooling towers and evaporative condensers using products containing hexavalent chromium (chromate) or organometallic algicides.

We don't allow discharge of hexavalent chromium from contaminated sites.
7. Cyanide is defined as labile cyanide amenable to alkaline chlorination. This includes free cyanide and those complex cyanides that are almost entirely, or in a large degree, dissociable, and so potentially toxic in low concentrations.
8. We won't consent to any discharge of organochlorine pesticides (including chlordane, dieldrin and heptachlor), or organophosphorus pesticides (including chlorpyrifos, diazinon and malathion) into the wastewater system.
9. The limit for lithium applies only to the Rouse Hill wastewater catchment.
10. Where flammable and/or explosive substances may be present, the customer must demonstrate to us that there is no possibility of explosions or fires in the wastewater system. We will discuss limits and charges with individual customers, before negotiating a trade waste agreement. The flammability of the discharge must never exceed five per cent of the Lower Explosive Limit (LEL) of hexane at 25 °C. In some cases, we may require a customer to install an LEL meter.
11. We will determine acceptance standards for total dissolved solids on a catchment-specific basis. A limit of 500 mg/L may apply to customers discharging to an inland WWTP or to one that is part of a designated re-use system. Acceptance standards will only apply to those customers discharging over 100 kg/day of total dissolved solids (TDS) or greater than one per cent of the total catchment TDS load (whichever is lower).
12. Analysis of volatile halocarbons must, at a minimum, include methylene chloride, chloroform, trichloroethylene and perchloroethylene.
13. This substance is made up of several substances including benzene, toluene, ethylbenzene, (m+p)-xylene and o-xylene.
14. As at 1 July 2013, the limit for soluble BOD applies only to the Smithfield catchment and SPS 67 catchments, due to corrosion.

Appendix E - Hazard Analysis Risk Assessment Report