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BOARD OF LAND AND NATURAL RESOURCES
STATE OF HAWAII

IN THE MATTER OF)	Case No. HA-22-02
)	
The Petition of Mauna Kea Hui for a	)	MEMORANDUM IN SUPPORT OF
Declaratory Order Filed May 24, 2021.	)	MAUNA KEA HUI’S MOTION TO
	)	REOPEN HEARING TO HEAR
	)	MOTION TO CONFIRM
	)	NON-COMPLIANCE WITH
	)	CONDITION NO. 4, OR,
	)	ALTERNATIVELY, PETITION FOR
	)	DECLARATORY ORDERS
	)	CONCERNING THE SAME;
	)	DECLARATION OF E. KALANI
	)	FLORES; EXHIBITS “A” - “H”;
	)	CERTIFICATE OF SERVICE
)	
)	
)	

**MEMORANDUM IN SUPPORT OF MAUNA KEA HUI’S MOTION TO REOPEN
HEARING TO HEAR MOTION TO CONFIRM NON-COMPLIANCE WITH
CONDITION NO. 4, OR, ALTERNATIVELY,
PETITION FOR DECLARATORY ORDERS CONCERNING THE SAME**

I. INTRODUCTION

E. KALANI FLORES (“Flores”), in capacity as an individual as well as a representative of the FLORES-CASE ‘OHANA (“FCO”), respectfully files this Memorandum in Support (“Memorandum”) of the Mauna Kea Hui’s Motion to Reopen Hearing to Hear Motion to

Received
Office of Conservation and Coastal Lands
Department of Land and Natural Resources
State of Hawaii
Dec 03 2021 16:29

Confirm Non-Compliance with Condition No. 4, or, Alternatively, Petition for Declaratory Orders Concerning the Same (“Motion”).

On October 20, 2021, the Board of Land and Natural Resources issued Minute Order No. 1 in this matter, granting Petitioners MAUNA KEA ANAINA HOU, KEALOHA PISCIOTTA, CLARENCE KUKAUAKAHI CHING, DEBORAH J. WARD, PAUL NEVES, and KAHEA: THE HAWAIIAN-ENVIRONMENTAL ALLIANCE’s (collectively, “Petitioners”) request to open a new proceeding for a declaratory ruling for the limited purpose of determining whether Permittee UNIVERSITY OF HAWAI‘I AT HILO (“UHH”) has complied with Condition No. 4 of Conservation District Use Permit HA-3568. The Board served Minute Order No. 1 via email on the parties named in the Certificate of Service attached to Petitioners’ Motion, filed May 24, 2021. Minute Order No. 1 invited the parties named in the Certificate of Service to file a briefing in response to the Petitioners’ Motion within fifteen (15) days of service of the Minute Order, and provided Petitioners ten (10) days after service of any responsive briefings to file a reply.

On November 8, 2021, E. KALANI FLORES (“Flores”), as an individual and on behalf of the FLORES-CASE ‘OHANA, filed a document entitled “State of Hawai‘i Board of Land and Natural Resources Failure to Properly Serve Minute Order No. 1 to the Flores-Case ‘Ohana” (“Flores Request”). The Flores Request asserted that Flores and the Flores-Case ‘Ohana were parties in Contested Case No. BLNR-CC-16-002 pertaining to the Thirty Meter Telescope (“TMT”) project and requested leave to file a responsive brief and a reply brief in this instant declaratory action.

On November 19, 2021, the BLNR issued Minute Order No. 2, granting Flores/FCO leave to file a responsive brief to the Petitioners’ Motion within fifteen (15) days of service of Minute Order No. 2.

II. FLORES/FCO’S SUPPORTING POSITIONS

The Flores/FCO’s positions on this matter substantively support and concur with the Mauna Kea Hui’s positions: (1) DLNR incorrectly approved UHH’s claims to have initiated work on the land or TMT construction; (2) the DLNR chairperson’s summary approval of UHH’s request prejudiced the due process rights of the Mauna Kea Hui because the reasons UHH cannot comply with Condition No. 4 require full examination by the Board, at which time the Board should reconsider its initial grant of the permit in 2017; (3) UHH’s letter to OCCL constituted an

improper request for a determination of conditions exercised under an unlawful rule; and, (4) UHH failed to provide supportive documentation for its claim to have initiated work on the land or construction of the TMT.

The Flores/FCO provides the following arguments and facts in support of the Mauna Kea Hui's Motion.

A. DLNR incorrectly approved initiation of construction work for the TMT project as UHH wasn't in compliance with all preconstruction conditions and mitigation measures of HA-3568 CDUP.

The Flores/FCO argue further that in order for DLNR to correctly approve UHH's claims to have initiated work on the land or construction of the TMT, UHH must have met all preconstruction conditions and mitigation measures of HA-3568 CDUP ("CDUP") before it could have commenced with any work or construction on the land as stipulated in General Condition No. 4.¹ In the same manner that DLNR incorrectly approved UHH's claims to have met this condition, DLNR also erred by failing to ensure UHH was in compliance with all preconstruction conditions and mitigation measures of the CDUP prior to issuing the *Notice To Proceed: Conservation District Use Permit (CDUP) HA-3568 Thirty Meter Telescope (TMT); Mauna Kea Science Reserve, Ka'ohē Mauka, Hāmakua District, Hawai'i TMK (3) 4-4-015:009* ("Notice to Proceed"), dated June 19, 2019, to UHH. Exh. A. Based upon this Notice to Proceed, it is very apparent that DLNR relied solely upon the *Request for Notice to Proceed with Construction, CDUP HA-3568 for the Thirty Meter Telescope at the Mauna Kea Science Reserve, Ka'ohē Mauka, Hamakua, Hawai'i TMK (3) 4-4-015:009* ("Request"), dated April 8, 2019, sent by UHH Interim Chancellor to Office of Conservation and Coastal Lands ("OCCL") Administrator to assert that preconstruction conditions and requirements were fulfilled in order to meet Special Condition No. 32.² Exh. B. This special condition is directly connected to and is

¹ General Condition No. 4: Any work done or construction to be done on the land shall be initiated within two (2) years of the approval of such use, in accordance with construction plans that have been signed by the Chairperson, and, unless otherwise authorized, shall be completed within twelve (12) years of the approval. The UH Hilo shall notify the Department in writing when construction activity is initiated and when it is completed.

² Special Condition No. 32: No construction work shall be initiated until the Applicant demonstrates compliance with all preconstruction conditions and mitigation measures

a prerequisite to General Condition No. 4 as it references the “**construction work**” to be “**initiated**” after UHH “demonstrates compliance with all preconstruction conditions and mitigation measures specifically required in this decision.” However, UHH failed to properly demonstrate that it met all preconstruction conditions and mitigation measures in order to fulfill General Condition No. 4.

In addition, DLNR failed, due to the lack of proper oversight, to verify that UHH was in compliance with all CDUP General Conditions including, but not limited to Nos. 1 and 3, prior to issuing this Notice:

1. UH Hilo shall comply with all applicable statutes, ordinances, rules, regulations, and conditions of the Federal, State, and County governments, and applicable parts of the HAR § 13-5 et seq.;
3. UH Hilo shall comply with all applicable Department of Health administrative rules;

Likewise, DLNR failed, due to the lack of proper oversight, to verify that UHH was in compliance with all CDUP Special Conditions including, but not limited to No. 32.

In the same manner that UHH failed to provide supportive documentation for its claim to have initiated construction work on the land, UHH also failed to provide complete documentation for its claim that it met all CDUP preconstruction conditions and requirements.

Any type of construction activities that were asserted to have occurred on or after June 12, 2019 would have been in violation of HA-3568 CDUP preconstruction conditions as UHH or the TMT International Observatory LLC (“TIO”) did not have a valid National Pollutant Discharge Elimination System (“NPDES”) permit which had expired June 11, 2019. Said original permit, NPDES Permit No. HI S000431, was issued by the State of Hawai‘i Department of Health (“DOH”) to permittee TMT Observatory Corporation effective June 12, 2014. Furthermore, the DOH issued a notice on May 23, 2019 for a public hearing that was held on June 25, 2019 for the renewal application of this NPDES permit. The appropriate course of action for DLNR at this time would have been to wait until DOH’s public hearing and/or contested case hearing was held to determine if any issues of concern might be brought up prior to issuing the Notice to Proceed. Commencing any type of construction work without a valid NPDES permit would also have been a violation of both state and federal laws.

specifically required in this decision. Once this condition has been satisfied, the Department will issue notice to proceed with construction;

A renewal application for this NPDES permit was improperly submitted to the DOH and as such was invalid at the time UHH and TIO asserted that construction work was initiated.

These are the facts pertaining to this permit:

1. NPDES Permit No. HI S000431 ("original permit") was issued June 11, 2014 to the **TMT Observatory Corporation**, not to the TMT International Observatory LLC (TIO). Exh. C.
2. This NPDES permit expired on June 11, 2019.
2. TMT Observatory Corporation did not transfer this NPDES permit to TIO by executing a request for either a transfer of ownership or minor modification in accordance with state and federal laws prior to this permit expiring.
3. Instead, TIO proceeded ahead to renew NPDES Permit No. HI S000431 without satisfying the statutory and regulatory requirements for a Renewal Individual NPDES application as evidenced in the *Transmittal Requirements and Certification Statement for E-Permitting Individual NPDES Application Submissions*, dated November 16, 2018. Exh. D.
4. Due to the original permit having expired and the failure to complete a transfer of ownership or minor modification, TIO was required to submit a **new** NPDES application.
5. DOH issued a notice on May 23, 2019 of a public hearing regarding NPDES Permit No. HI S000431 that was held on June 25, 2019. Due to the DOH having technical issues in receiving public comment through email, the comment period was extended to July 9, 2019.
6. DOH finally provided a response to public hearing comments six months later on January 9, 2020 (Doc. 01011PCTM.20).
7. DOH later issued a notice to TIO, *Rescinding National Pollutant Discharge Elimination System (NPDES) Revised Draft Permit for TMT International Observatory Mauna Kea, Island of Hawaii, Hawaii Permit No. HI S000431*, dated March 3, 2021. Exh. E.
8. A contested case hearing was scheduled to begin February 2021, but was cancelled after the notice regarding rescinding the NPDES permit was issued.
9. DOH re-published its notice regarding this NPDES permit on April 8, 2021.

It is very evident that the TMT Observatory Corporation and TIO are two separate legal entities as was affirmed in the BLNR's *Findings of Fact, Conclusions of Law and Decision and Order* (Case No. BLNR-CC-16-002) as noted in the finding of facts Nos. 224 and 225.

It was further noted that TIO assumed ownership and control of the TMT project, including its assets and liabilities, through the *Asset and Employee Transfer Agreement* ("Transfer Agreement"), dated October 1, 2016, between TMT Observatory Corporation and TIO. Exh. F. However, TMT Observatory Corporation failed to transfer its interest and ownership to the NPDES permit as it was clearly omitted from Schedule 1.1 of this Transfer Agreement. TIO then attempted to transfer this expired NPDES permit through an after-the-fact *Bill of Sale and Assignment Agreement*, dated September 30, 2020, between TMT Observatory Corporation and TIO. Exh. G. This action further affirmed that TIO was not in possession of the required NPDES at the time UHH asserted that construction work was initiated. It is also undisputed that the original NPDES Permit No. HI S000431 holder, TMT Observatory Corporation, failed to execute either a transfer of ownership or minor modification designating TIO as the new permittee prior to DLNR issuing its Notice to proceed with construction work.

Conclusively, UHH could not have been able to legally commence with any work or construction on the land in order to meet Condition No. 4 if it didn't meet all preconstruction conditions and mitigation measures of the CDUP as stipulated in Special Condition No. 32. In addition, UHH failed to demonstrate and provide supportive documentation for its claim that it met all preconstruction conditions and mitigation measures of the CDUP as well as Condition No. 4. Likewise, DLNR failed to verify UHH's claims that it met all preconstruction conditions and mitigation measures of the CDUP as well as Condition No. 4.

This is an ongoing pattern dating back several decades of DLNR failing its statutory duty and responsibility to ensure that the University of Hawai'i as the lessee of the Mauna Kea lands within a conservation district are in compliance with its permits. This matter was previously identified by the Office of the Auditor as stated in the *Audit of the Management of Mauna Kea and the Mauna Kea Science Reserve* (Report No. 98-6, February 1998) that it "found that permit conditions, requirements, and regulations were not always enforced" by DLNR.

It was also stated in the Summary of the *Follow-Up Audit of the Management of Mauna Kea and the Mauna Kea Science Reserve* (Report No. 05-13, December 2005) that DLNR "has not provided a mechanism to ensure compliance with lease and permit requirements in protecting

and preserving Mauna Kea's natural resources. Although the department is mandated to protect resources, it has not regularly monitored the university for compliance with conservation district use permit requirements." As a result of this lack of oversight by DLNR, the cumulative impacts upon Mauna Kea's natural, cultural, and historic resources have been adverse, substantial, and significant.

This same *Follow-up Audit* (2005) also stated that "The university also does not appear to systematically monitor its tenant observatories for compliance with conservation district use permit requirements and was recently fined \$20,000 for violations in May 2004."

B. UHH failed to provide supportive documentation and instead asserted inaccurate and false statements for its claim to have initiated construction work.

It's very apparent that the UHH's *Notice of Initiation of Work and/or Construction for the Thirty Meter Telescope Project, CDUP-A-3568, General Condition No. 4* ("Notice of Initiation"), dated April 28, 2021, submitted to OCCL Administrator was filled with unsubstantiated, inaccurate, and false statements relevant to this matter that wasn't properly checked and verified by DLNR. Petitioner's Exh. 03.

It's clearly discernible that this Notice of Initiation was based in part on UHH's *Request for Extension of Time for General Condition No. 4 of Conservation District Use Permit (COUP) HA-3568 (Thirty Meter Telescope) at the Mauna Kea Science Reserve, Ka'ohe Mauka, Hamakua, Hawai'i; TMK (3) 4-4-015:009* ("Request for Extension"), dated June 30, 2019, sent by UHH Chancellor to BLNR Chairperson. Petitioner's Exh. 01.

Based upon the extremely brief timeline of approval by DLNR of UHH's Request for Extension, it's very evident that DLNR failed to properly check and verify the statements in this request when it was approved on the same day, July 30, 2019, it was received as noted in BLNR Chairperson's *Extension of Processing Deadlines: Conservation District Use Permit (CDUP) HA-3568 Thirty Meter Telescope (TMT); Mauna Kea Science Reserve, Ka'ohe Mauka, Hāmakua, Hawai'i; Tax Map Key (TMK) parcel (3) 4-4-015:009* ("Extension of Processing Deadlines"), dated July 30, 2019, sent to the UHH Chancellor. Petitioner's Exh. 02. Likewise, it's very evident that UHH failed to properly check and verify the statements in their request that was drafted based upon the email sent only a day before by TIO's attorney firm, Watanabe Ing

LLP, to the Vice President for Legal Affairs, University General Counsel, dated July 29, 2019. Petitioner's Exh. 01. Below is an excerpt from this email;

TIO also believes that, since the issuance of the Notice to Proceed, it has in fact "initiated" "work" and/or "construction" at the TMT Project site through various activities at the site, including the removal of unpermitted *ahu*, and by conducting various site surveys.

UHH's Notice of Initiation was filled with unsubstantiated, inaccurate, and false statements that wasn't properly checked and verified by DLNR.

Firstly, the deadline to initiate construction set forth in Condition No. 4 was extended to **September 26, 2019** as noted in BLNR Chairperson's Extension of Processing Deadlines - not September 28, 2019 as noted in UHH's Notice of Initiation. This is the initial example of several inaccurate and false statements contained in this notice.

The assertion that the removal of *ahu* on **June 20, 2019** from the northern plateau of Mauna a Wākea at or near the proposed TMT project site is being considered a form of initiating construction work is absolutely false for the following reasons; 1) the removal of *ahu* and any associated *ho'okupu* on this date was actually led and executed by multiple law enforcement agencies including the Division of Conservation and Resources Enforcement ("DOCARE") law enforcement officers of DLNR, not by UHH or TIO representatives; 2) News reports and DLNR's own records would demonstrate their their personnel were directly involved with the physical removal and disposal of the *ahu* and any associated *ho'okupu* on this date and these items were then transported to the DOCARE facility in Hilo;³ Exh. H. and 3) UHH and TIO haven't provided any evidence or witnesses to substantiate their assertion.

The other assertions that the meetings and/or surveys held on **June 25, July 8 and 12, 2019** should be considered a form of initiating construction work is absolutely false for the following reasons; 1) These types of meetings are identified as "pre-construction conferences" in the TMT Project Management Plan that was included as part of the CDUP; 2) Surveys, such as land, biological, and archaeological surveys, are typically done prior to any construction work

³ *News conference: TMT receives notice to proceed from the state.* Video of news conference can be found at: <https://www.youtube.com/watch?v=0AJ9xEMsZRs>

and are also considered pre-construction activities; and 3) If these activities are being considered as construction work, then an independent on-site construction monitor would have been required to be present at all times construction activity is underway at the TMT site. Likewise, archaeological and cultural monitors are required to be present during all ground-disturbing activities. The requirement for monitors is stipulated in the TMT Project Management Plan and Comprehensive Management Plan. Such monitors weren't listed as being present on those dates. If these meetings and surveys are being considered "construction work", then these activities would constitute violations of General Condition No. 8.⁴ If so, then BLNR should be holding UHH accountable for these violations of the CDUP, not unlawfully affirming an initiation of construction work.

The Big Island Invasive Species Committee's inspection of TIO's construction equipment and vehicles on **July 15, 2019** is another false assertion in UHH's Notice of Initiation as this type of activity is considered a preconstruction requirement as stipulated in the TMT Project Management Plan and this activity didn't even occur on Mauna Kea.

UHH's other absurd assertion is that mobilizing construction vehicles and equipment on **July 16, 2019** equates to construction work. This would set a new undesirable precedent for future CDUPs for such general conditions. If a future CDUP permittee attempted to mobilize construction equipment, but failed to do so before a deadline, such a condition would be considered met. Case in point, if a project developer or CDUP permittee attempted to mobilize construction equipment to a project site, but such transport was halted due to an accident, vehicle breakdown, natural disaster, or other circumstances that prevented from actually initiating construction work, such an attempt could be claimed as meeting this permit condition. Instead of making such a false claim, the permittee has the recourse to request a first extension from the BLNR Chair. If an extension is granted, but circumstances still prevent initiation of construction work to meet this particular permit condition, the permittee has an additional recourse to request a second extension from the BLNR pursuant to HAR §13-5-43.⁵]

⁴ General Condition No. 8: The TMT Project will comply with any terms and conditions outlined in the Comprehensive Management Plan and associated sub-plans.

⁵ HAR §13-5-43 Time extensions. (a) Permittees may request time extensions for the purpose of extending the period of time to comply with the conditions of a permit. (b) Time extensions may be granted as determined by the chairperson on all departmental permits and on the first request for extension of a board permit of up to two years to initiate or complete a project, based on supportive documentation from the applicant. (c) Time extensions may be granted by the

The extent of unsubstantiated, inaccurate, and false statements noted in UHH's Notice of Initiation demonstrate a lack of integrity and a failure to provide acceptable oversight by UHH of the TMT project and associated activities.

It's very obvious that General Condition No. 4 pertains to construction work on the proposed site which is very distinct from preconstruction activities.⁶ Otherwise, this type of general condition would be considered irrelevant for CDUPs if preconstruction activities are now being considered as an initiation of construction.

Furthermore, the two year-extension of the permit, granted by the BLNR Chairperson, clearly stipulated "a new initiation deadline of September 26, 2021." It's undisputed that UHH failed to request a second extension prior to this deadline. Neither did the BLNR grant a second extension pursuant to HAR §13-5-43 (c)(d). It's uncertain as to why UHH didn't request a second extension in a timely manner since it submitted a request for the first extension. It appears that UHH, TIO, and/or their consultants/attorneys were trying to avoid public input and scrutiny if this second request for extension was brought before the BLNR for consideration.

C. DLNR's summary and unlawful approval of "initiated" construction prejudiced due process rights to enforcement of permit conditions.

Flores/FCO also contend that BLNR chairperson's summary approval of UHH's Notice of Initiation prejudiced the due process rights of the Mauna Kea Hui as well as Flores/FCO and other parties to contested case hearing (No. BLNR-CC-16-002), for the similar reasons noted in the Petitioners' Motion.

board upon the second or subsequent request for a time extension on a board permit, based on supportive documentation from the applicant. (d) Unless otherwise authorized, all time extensions shall be submitted to the department prior to the expiration deadline. (e) If a time extension request is received after the expiration deadline, it shall be forwarded to the board for review. If a request for a time extension is not received within one year after the expiration deadline, the permit shall be void.

⁶ General Condition No. 4 is stipulated as a standard condition of any land use permitted within the conservation district pursuant to HAR §13-5-42 (a)(8).

III. CONCLUSION

Based on all of the reasons presented herein and any reasons appearing of record, Flores/CFO supports the Petitioners' request that the BLNR reopen its contested case hearings for the limited purpose of hearing and deciding this motion to confirm UHH's noncompliance with Condition No. 4, or in the alternative, entering declaratory orders confirming the same. Flores/CFO also contend that UHH was not in compliance with other conditions of CDUP HA-3568 and that BLNR/DLNR failed in their statutory duties and obligations to ensure compliance with these permit conditions and requirements in protecting and preserving Mauna a Wākea's natural and cultural resources within a conservation district. Likewise, UHH has also demonstrated that it doesn't have the capacity and expertise to properly manage astronomy development such as the TMT project to ensure that TIO, project owner, is in compliance with its permit conditions and requirements. As such, members of the public should have a means and method for notifying the BLNR/DLNR when there are noncompliance issues associated with BLNR issued permits.

DATED: Pu'ukapu, Hawai'i, December 3, 2021

/s/ E. Kalani Flores
E. KALANI FLORES

BOARD OF LAND AND NATURAL RESOURCES
STATE OF HAWAI‘I

IN THE MATTER OF	)	Case No. HA-22-02
)	
The Petition of Mauna Kea Hui for a	)	DECLARATION OF E. KALANI
Declaratory Order Filed May 24, 2021.	)	FLORES
)	

DECLARATION OF E. KALANI FLORES

I, E. KALANI FLORES, hereby declare as follows:

1. I am a member of the Flores-Case ‘Ohana.
2. The Flores-Case ‘Ohana is an unincorporated association of a Kanaka Maoli (aka Native Hawaiian) family whose members reside on Hawai‘i Island and who engage in Native Hawaiian traditional and customary practices on Maua a Wākea, also referred to as Mauna Kea.
3. I have the authority to represent the Flores-Case ‘Ohana in this matter before the State of Hawai‘i Board of Land and Natural Resources (“BLNR”).
4. I make this declaration in lieu of an affidavit and based on personal knowledge and the records and files of this matter.
5. Attached hereto as Exhibit “A” is a true and correct copy of the *Notice To Proceed: Conservation District Use Permit (CDUP) HA-3568 Thirty Meter Telescope (TMT); Mauna Kea Science Reserve, Ka ‘ohe Mauka, Hāmakua District, Hawai‘i TMK (3) 4-4-015:009*, dated June 19, 2019, sent by BLNR Chairperson, Suzanne D. Case, to UHH Interim Chancellor, Marcia Sakai, obtained from the OCCL online file repository available at:
<https://dlnr.hawaii.gov/occl/tmt/>
6. Attached hereto as Exhibit “B” is a true and correct copy of the *Request for Notice to Proceed with Construction, CDUP HA-3568 for the Thirty Meter Telescope at the Mauna Kea Science Reserve, Ka ‘ohe Mauka, Hamakua, Hawai‘i TMK (3) 4-4-015:009*, dated April 8, 2019, a copy without all attachments, sent by UHH Interim Chancellor, Marcia Sakai, to OCCL Administrator, Samuel Lemmo, obtained from the OCCL online file repository available at: <https://dlnr.hawaii.gov/occl/tmt/>

7. Attached hereto as Exhibit “C” is a true and correct copy of NPDES Permit No. HI S000431 issued June 11, 2014 to the TMT Observatory Corporation, obtained from the OCCL online file repository available at: <https://dlnr.hawaii.gov/occl/tmt/>

8. Attached hereto as Exhibit “D” is a true and correct copy of the *Transmittal Requirements and Certification Statement for E-Permitting Individual NPDES Application Submissions*, dated November 16, 2018, a copy without all attachments (i.e. NOI Form C, maps), obtained from the DOH Clean Water Branch - Public Notices and Updates webpage at: <https://health.hawaii.gov/cwb/clean-water-branch-home-page/public-notice-and-updates/>

9. Attached hereto as Exhibit “E” is a true and correct copy of the *Rescinding National Pollutant Discharge Elimination System (NPDES) Revised Draft Permit for TMT International Observatory Mauna Kea, Island of Hawaii, Hawaii Permit No. HI S000431*, dated March 3, 2021.

10. Attached hereto as Exhibit “F” is a true and correct copy of the *Asset and Employee Transfer Agreement*, dated October 1, 2016, between TMT Observatory Corporation and TIO.

11. Attached hereto as Exhibit “G” is a true and correct copy of the *Bill of Sale and Assignment Agreement*, dated September 30, 2020, between TMT Observatory Corporation and TIO.

12. Attached hereto as Exhibit “H” is a true and correct copy of the Hawaii News Now news report, *Activists pledge more protests as Thirty Meter Telescope construction given green light to proceed*, published: June 21, 2019 at 7:55 AM HST, obtained from the Hawaii News Now webpage at: <https://www.hawaiinewsnow.com/2019/06/20/authorities-dismantle-structures-mauna-kea-set-up-by-tmt-protesters/>

I declare under penalty of perjury that the foregoing is true and correct.

DATED: Pu‘ukapu, Hawai‘i, December 3, 2021

/s/ E. Kalani Flores

E. KALANI FLORES

BOARD OF LAND AND NATURAL RESOURCES
STATE OF HAWAII

IN THE MATTER OF)	Case No. HA-22-02
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)	CERTIFICATE OF SERVICE

CERTIFICATE OF SERVICE

The undersigned hereby certifies that the above referenced documents were served upon the following parties by the means indicated below:

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DATED: Pu'ukapu, Hawai'i, December 3, 2021

/s/ E. Kalani Flores

E. KALANI FLORES

DAVID Y. IGE
GOVERNOR OF
HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

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COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

REF: OCCL: MC

CDUP HA-3568

Marcia Sakai, Interim Chancellor
University of Hawai'i at Hilo
200 West Kāwili Street
Hilo, HI 96720

JUN 19 2019

SUBJECT: NOTICE TO PROCEED: CONSERVATION DISTRICT USE PERMIT (CDUP) HA-3568
Thirty Meter Telescope (TMT)
Mauna Kea Science Reserve, Ka'ōhe Mauka, Hāmākua District, Hawai'i
TMK (3) 4-4-015:009

The Department of Land and Natural Resources (DLNR) has received and reviewed the following documents related to Conservation District Use Permit (CDUP) HA-3568 for the Thirty Meter Telescope:

1. Civil Construction Package
2. Best Management Practices for the Civil Construction Package
3. Recreation Parking Plan
4. Mitigation measure matrix for compliance with CDUP HA-3568 general and special conditions

The DLNR approved CDUP HA-3568 for TMT in a Decision and Order in October 2017. The documents were submitted in support of the following two conditions of the permit:

General Condition No. 5. Before proceeding with any work authorized by the Board, UH Hilo shall submit four copies of the construction and grading plans and specifications to the Chairperson or his authorized representative for approval for consistency with the conditions of the permit and the declarations set forth in the permit application. Three of the copies will be returned to UH Hilo. Plan approval by the Chairperson does not constitute approval required from other agencies.

Special Condition No. 32: Construction can be initiated once the permittee demonstrates compliance with the preconstruction conditions and mitigation measures contained in the Decision. The Department is required to review the construction and grading plans for consistency with the permit. Once the construction and grading plans

EXHIBIT "A"

have been signed and the preconstruction conditions have been met the Department will issue a Notice to Proceed to TMT.

The Civil Construction Package was submitted to DLNR on February 3, 2019. The Civil Construction Package prepares the site for construction, and involved batch plant site, the access way, and the TMT site for construction. Staff from the Office of Conservation and Coastal Lands (OCCL) met with the TMT design team to review the construction documents on March 11, 2019. The plans that were submitted are consistent with the Environmental Impact Statement (EIS) and the Conservation District Use Application (CDUA).

The mitigation measures required by the CDUP include actions related to historic resources, archaeological and cultural monitoring, materials waste management and spill prevention, waste minimization, cultural and natural resources training for project employees and contractors, arthropod monitoring, safety and accident prevention, and invasive species prevention and control.

Additional mitigation measures were agreed to in the Final Environmental Impact Statement and the TMT Management Plan. These include actions related to access way paving and design, arthropod monitoring, noise pollution, noise permit and noise variance, independent construction monitors, best management practices documentation, a rock movement plan, decommissioning, site documentation, construction mitigation measures, a cultural and archaeological monitoring plan, an NPDES permit, and an oversize and overweight vehicles permitting plan.

Based upon our review of the information you provided, the TMT project has met the preconstruction requirements contained in the CDUP and associated management plan. The Department thus issues TMT a Notice to Proceed.

If you have any questions, please feel free to contact Michael Cain at the Office of Conservation and Coastal Lands (OCCL) at 808-587-0048.

Sincerely,



Suzanne D. Case, Chairperson
Board of Land and Natural Resources

c: Stephanie Nagata, Director, OMKM
Gary Sanders, Project Manager, TMT
DLNR – Land Division, Division of Forestry and Wildlife, Division of Conservation and Resource Enforcement
County Planning Department
Jim Hayes, Planning Solutions Inc.



UNIVERSITY
of HAWAII
HILO

University of Hawai'i at Hilo Administration
Office of the Chancellor

April 8, 2019

Mr. Samuel Lemmo
Administrator
Office of Conservation and Coastal Lands
Department of Land and Natural Resources
1151 Punchbowl Street, Room 131
Honolulu, Hawaii 96813

Subject: Request for Notice to Proceed with Construction, CDUP HA-3568 for the
Thirty Meter Telescope at the Mauna Kea Science Reserve, Ka'ohe Mauka,
Hamakua, Hawai'i TMK (3) 4-4-015:009

Dear Mr. Lemmo:

The University of Hawai'i at Hilo respectfully requests a notice to proceed with the construction of the Thirty Meter Telescope (TMT) project. This notice is a requirement of Special Condition 32 of CDUP HA-3568:

"No construction work shall be initiated until the Applicant demonstrates compliance with all preconstruction conditions and mitigation measures specifically required in this decision. Once this condition has been satisfied, the Department will issue [a] notice to proceed with construction"

The Office of Maunakea Management received a notice from TMT International Observatory LLC (TIO) indicating its intent to start construction. The Office reviewed the conditions of the CDUP and is satisfied that the TMT project has complied with all the pre-construction conditions and mitigation measures related to the start of construction for the Phase I, Civil Package. A table containing all the CDUP conditions and compliance actions is attached. The table also indicates whether the CDUP condition is a pre-construction requirement. Also attached is a matrix listing all mitigation measures and management actions required in the documents identified in General Conditions 6, 7, 8 and 9, and the project's fulfillment of the pre-construction measures. Enclosed is a copy of the TMT project's *Best Management Practices for the Civil Construction Package* the overarching policy manual for this phase of construction.

200 W. Kāwili St.
Hilo, Hawai'i 96720-4091
Telephone: (808) 932-7348
Fax: (808) 932-7338
hilo.hawaii.edu

EXHIBIT "B"

An Equal Opportunity/Affirmative Action Institution

Mr. Samuel Lemmo
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The TIO has not yet determined when it plans to start construction, but intends to commence construction before the expiration of the two-year limit specified in General Condition 4 of the subject CDUP which was issued on September 27, 2017.

We look forward to receiving a notice to proceed. Should you have any questions or require additional information, please contact Stephanie Nagata, Director, Office of Maunakea Management at (808) 933-0734 or by email at nagatas@hawaii.edu.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "Marcia Sakai".

Marcia Sakai
Interim Chancellor

Attachments

c: Stephanie Nagata, Director, OMKM
Gary Sanders, Project Manager, TMT

CONDITIONS
TMT CDUP HA-3568

ITEM	TASKS	PRE- CONSTRUCTION	COMMENTS
GENERAL CONDITIONS			
GC1	UH Hilo shall comply with all applicable statutes, ordinances, rules, regulations, and conditions of the Federal, State, and County governments, and applicable parts of the HAR § 13-5 et seq.	X	UH Hilo acknowledges and concurs to the best of its knowledge that it has complied with and will continue to comply with all applicable statutes, ordinances, rules, regulations, and conditions, including HAR Chapter 13-5.
GC2	UH Hilo shall obtain appropriate authorization from the Department for the occupancy of state lands, if applicable.	X	UH was granted General Lease S-4191 for the Mauna Kea Science Reserve in 1968.
GC3	UH Hilo shall comply with all applicable Department of Health administrative rules.	X	UH Hilo acknowledges and concurs. TMT has obtained a National Pollutant Discharge Elimination System (NPDES) permit. TMT has also obtained a Community Noise permit, which is required for normal work hours. Even though TMT does not plan on working outside normal work hours during the civil construction phase, it has obtained a Community Noise Variance.
GC4	Any work done or construction to be done on the land shall be initiated within two (2) years of the approval of such use, in accordance with construction plans that have been signed by the Chairperson, and, unless otherwise authorized, shall be completed within twelve (12) years of the approval. The UH Hilo shall notify the Department in writing when construction activity is initiated and when it is completed.	X	Any work done or construction shall comply with the 2-year and 12-year requirements in consultation with DLNR. UH Hilo shall notify DLNR in writing when TMT starts construction and when it is completed.
GC5	Before proceeding with any work authorized by the Board, UH Hilo shall submit four copies of the construction and grading plans and specifications to the Chairperson or his authorized representative for approval for consistency with the conditions of the permit and the declarations set forth in the permit application. Three of the copies will be returned to UH Hilo. Plan approval by the Chairperson does not constitute approval required from other agencies.	X	The four copies of the construction drawings and construction specifications were submitted to DLNR on February 4, 2019.
GC6	All representations relative to mitigation set forth in the Environmental Impact Statement and Conservation District Use Application are incorporated and adopted as conditions of the permit.	X	UH Hilo and TMT acknowledges and concurs.
GC7	All mitigation measures and management actions contained in the Historic Preservation Mitigation	X	UH Hilo and TMT acknowledge and concur. These plans were all attachments to the

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ITEM	TASKS	PRE- CONSTRUCTION	COMMENTS
	Plan, Construction Plan, Historical & Archaeological Site Plan, Maintenance Plan, and Arthropod Monitoring Plan, are incorporated as conditions of this permit.		CDUA.
GC8	The TMT Project will comply with any terms and conditions outlined in the Comprehensive Management Plan and associated sub-plans.	X	UH Hilo and TMT acknowledge and concur. Terms and conditions of the Comprehensive Management Plan and subplans are incorporated in the TMT Management Plan, which was incorporated into the CDUA.
GC9	The TMT Management Plan is approved, including all specific management actions articulated in the TMT Management Plan including, Cultural Resources Management, Natural Resources Management, Education & Outreach, Astronomical Resources, Permitting and Enforcement, Infrastructure and Maintenance, Construction Guidelines, Site Recycling, Decommissioning, Demolition & Restoration, Future Land Uses, and Monitoring, Evaluation & Updates. These management actions and their associated mitigation measures are incorporated as conditions of this permit.	X	UH Hilo and TMT acknowledge and concur. The TMT Management Plan was incorporated into the CDUA.
SPECIAL CONDITIONS			
SC1	Ensuring that employees attend mandatory cultural and natural resources training with a minimum of one days' training.		In addition to participation in the annual cultural and natural resources training, employees shall attend a minimum one-day training. TMT employees have been taking the orientation annually since 2013.
SC2	Working with the 'Imiloa Astronomy Center, OMKM, and Kahu Kū Mauna to develop informational exhibits for visitors regarding the natural, cultural and archaeological resources of Mauna Kea that could be used at the Mauna Kea VIS, 'Imiloa, TMT facilities, and other appropriate locations.		'Imiloa, Maunakea Observatories Support Services and OMKM are working on exhibit designs for the Visitor Information Station (VIS). Additional exhibits that may be used at the TMT facilities and 'Imiloa, and/or updates to the VIS will be also be explored following completion of the VIS exhibits. TMT is committed to working with the respective entities a few years after the start of construction.
SC3	Funding the re-naturalization of the closed access road on Pu'u Poli'ahu, partial re-naturalization of the batch plant staging area after construction has been completed, and camouflaging of the utility pull boxes in certain locations to reduce the visual impact from the summit area.		TMT is committed to funding and executing the re-naturalization of the vehicular road to the top of Pu'u Poli'ahu . Upon completion of construction of the TMT project, TMT will fund and execute the partial re-naturalization of the batch plant. Also upon completion of the installation of all electrical

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ITEM	TASKS	PRE-CONSTRUCTION	COMMENTS
			upgrades and in consultation with Kahu Kū Mauna, TMT will camouflage the utility pull boxes to reduce visual impacts in the summit area.
SC4	Implementing an invasive species control program.	X	TMT's invasive species control program is included in TMT's Best Management Practices. TMT is also required to comply with OMKM's Invasive Species Management Plan (ISMP). TMT secured the services of the Big Island Invasive Species Committee to assist with inspections required in OMKM's ISMP.
SC5	Working with OMKM to develop and implement a wēkiu bug habitat restoration study.		TMT is committed to working with OMKM on the wēkiu bug habitat restoration study. TMT has consulted with OMKM on the habitat proposal.
SC6	Implementing the "Zero Waste Management" policy.		The design of TMT is based on a zero waste policy. For example, TMT will have a closed wastewater system.
SC7	Filling employment opportunities locally to the greatest extent possible.		All TMT positions are advertised in Hawai'i County. TMT is building its administrative support staff and has recently filled several positions, including one Hawai'i Office Administrator , one Accounts Payable Specialist, one Senior Technical Manager, and one Environmental, Safety & Compliance Officer.
SC8	Mandating that employees traveling beyond Hale Pōhaku take part in a ride-sharing program using project vehicles.		A ride-sharing program is incorporated in the TMT Management Plan and Best Management Practices.
SC9	Using energy savings devices such as solar hot water systems, photovoltaic power systems, energy efficient light fixtures, and Energy Star rated appliances.		Energy efficient light fixtures are part of the TMT design and appliances will also meet this condition.
SC10	The University will decommission three telescopes permanently, as soon as reasonably possible, and no new observatories will be constructed on those sites. This commitment will be legally binding on the University and shall be included in any lease renewal or extension proposed by the University for Mauna Kea.		UH has committed to decommission three telescopes. The Caltech Submillimeter Observatory is currently undergoing the decommissioning process pursuant to the BLNR approved Decommissioning Plan. UHH removed the telescope from its summit facility and submitted its Notice of Intent to decommission to the Maunakea Management Board.

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			UH anticipates submitting a notice of intent to decommission UKIRT by the end of 2020 and initiate the physical dismantling 2024.
SC11	Notwithstanding any lease renewal or extension, consistent with the Decommissioning Plan, at least two additional facilities will be permanently decommissioned by December 31, 2033, including the Very Long Baseline Array antenna and at least one additional observatory.		UH has committed to decommission, by the end of the current master lease, VLBA and one additional observatory.
SC12	Providing \$1 million annually, adjusted for inflation, for "Community Benefits Package" which will commence with construction and continue through the term of the sublease. The package will be administered via The Hawai'i Island New Knowledge (THINK) Fund Board of Advisors. In addition to the types of programs, described in the "Community Benefits Package" in the Findings of Fact, at least \$5,000 annually of the \$1 million shall support a program or programs to assist at risk youth, specifically focusing on the children of incarcerated parents.		TMT has been making annual contributions to the THINK Fund since 2014. Seventy-five percent of the contributions are made to the Hawai'i Community Foundation and twenty-five percent to Ke Ali'i Pauahi Foundation. The last contribution occurred February 2019. Hawai'i Community Foundation is currently seeking proposals from Hawai'i Island non-profit organizations that work with children of incarcerated parents for the administration of the annual \$5,000.
SC13	The Board of advisors shall ensure that a reasonable amount of funding is directed at programs for the most vulnerable and underserved members of Hawai'i Island communities so that they can participate in our technological future.		TMT has informed Hawai'i Community Foundation that the funds are to be distributed according to this CDUP condition.
SC14	The funding shall be distributed with reasonable promptness and not be used to build a permanent endowment.		TMT acknowledges and concurs.
SC15	Partnering with other institutions to implement a Workforce Pipeline Program, headed by at least one full-time position through the Community Outreach office, to prepare local residents for jobs in science, engineering, and technical fields.		Workforce Pipeline Program funding has been ongoing for ten years and will continue. The program is in partnership with UH Hilo, Hawai'i Community College, Department of Education, Department of Business Economic Development and Tourism, and a number of non-profit organizations. High school and college internships and mentorships are being funded for Hawai'i Island students.
SC16	UHH will ensure that the survey of the power line corridor easement complies with DLNR standards and is in accordance with the conditions contained in the grant of easement (including the		UH Hilo acknowledges the completion of the survey and implementation of this condition pursuant to the approved grant of easement is required prior to HELCO's commencement

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	Mauna Kea Ice Age Natural Area Reserve) that was approved by the BLNR in August 1985. The University will provide copies of the survey to DOFAW.		of work to upgrade the power line.
SC17	OMKM will consult with the U.S. Fish and Wildlife Service and experts who are advising OMKM, including representatives from the DLNR regarding surveys of the wēkiu bug and invertebrates along the utility corridor, including Pu'u Hau Kea and the pu'u west of the Parking Area 1.		OMKM has been working with the Wēkiu Bug Scientific Committee since 2003. This committee, which includes representatives from DLNR and scientists, reviews data, and advises on survey and research efforts related to the Wēkiu Bug, arthropods and invasive species. The U.S. Fish and Wildlife Service serves in an advisory capacity to the committee.
SC18	The construction contractor will be required to minimize the visual changes to land within the utility line right-of-way during utility upgrades. Any disturbance outside of the easement area of the construction corridor will be restored to the extent possible.		HELCO has been made aware of these conditions. Should disturbances occur, TMT will, to the fullest extent possible, restore any disturbance made outside the easement area.
SC19	UH Hilo will present a plan for handling recreational parking during construction to the OCCL for review and approval, at least one month prior to beginning construction.	X	Recreational parking is being set aside in the batch plant area. OMKM consulted with Hawai'i Island Natural Area Reserve staff in the development of the plan. The parking plan is included in the construction documents and will be installed during the Phase I construction phase. The parking plan was submitted to DLNR on February 4, 2019.
SC20	Following construction, TMT shall keep their area clean and free of trash or unattended tools and equipment, unless authorized in writing by OMKM and OCCL.		TMT acknowledges and concurs. Upon completion of construction, OMKM shall include the TMT site in the twice-annual inspections of observatories for compliance with their permit.
SC21	The Archaeological Monitoring Plan will be submitted to the State Historic Preservation Division for review and approval prior to the onset of construction.	X	TMT's Archaeological Monitoring Plan was approved by SHPD in May 2013.
SC22	Sublease rent will be deposited into the Mauna Kea Lands Management Special Fund, and only used for management of Mauna Kea and related purposes as provided by law.		UH Hilo/OMKM confirms that all TMT sublease payments are deposited into the Mauna Kea Lands Management Special Fund and are used for management of Maunakea.
SC23	UH Hilo/OMKM will notify OCCL of the date of the twice-annual inspections of the project site and allow Department staff to attend if available.		UH Hilo/OMKM acknowledges and concurs.
SC24	UH Hilo/OMKM will provide OCCL and BLNR a copy of TIO's annual report to OMKM, as		UH Hilo/OMKM acknowledges and concurs.

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ITEM	TASKS	PRE- CONSTRUCTION	COMMENTS
	required by Section 5.3 of the TMT Management Plan.		
SC25	UH Hilo will allow BLNR to name a DLNR representative to participate in the CMP five-year management review process.		On January 25, 2019, the Board of Land and Natural Resources delegated the responsibility to appoint a DLNR representative to the Chair.
SC26	When provided or required, potable water supply and sanitation facilities shall have the approval of the Department of Health and the county Board of Water Supply.		UH Hilo requires TMT to submit copies of approvals from the Department of Health and Hawai'i County Department of Water Supply.
SC27	UH Hilo understands and agrees that this permit does not convey any vested rights or exclusive privilege.	X	UH Hilo acknowledges and concurs.
SC28	In issuing this permit, the Department and Board have relied on the information and data that UH Hilo has provided in connection with this permit application. If, subsequent to the issuance of this permit, such information and data prove to be false, incomplete or inaccurate, this permit may be modified, suspended or revoked, in whole or in part, and/or the Department may, in addition, institute appropriate legal proceedings.		UH Hilo acknowledges and concurs.
SC29	Where any interference, nuisance, or harm may be caused, or hazard established by the use, UH Hilo shall be required to take the measures to minimize or eliminate the interference, nuisance, harm, or hazard.		UH Hilo acknowledges and concurs. UH Hilo shall work with TMT to take required measures should any of these occur.
SC30	Should historic remains such as artifacts, burials or concentration of charcoal be encountered during construction activities, work shall cease immediately in the vicinity of the find, and the find shall be protected from further damage. The contractor shall immediately contact the State Historic Preservation Division (692-8015), which will assess the significance of the find and recommend an appropriate mitigation measure, if necessary; the Applicant will also notify the Office of Hawaiian Affairs at the same time.		TMT shall follow the protocols described in the Archaeological Monitoring and Historic Preservation Mitigation plans. If inadvertent burials are encountered, TMT shall follow the protocols in OMKM's Burial Treatment Plan that was approved by the State Historic Preservation Division.
SC31	During construction, appropriate mitigation measures shall be implemented to minimize impacts to off-site roadways, utilities, and public facilities.		OMKM rangers regularly patrol and monitor construction activities. They will address activities described in this condition.
SC32	No construction work shall be initiated until the Applicant demonstrates compliance with all	X	UH Hilo/OMKM acknowledges and concurs. Pre-construction CDUP permit conditions

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ITEM	TASKS	PRE-CONSTRUCTION	COMMENTS
	preconstruction conditions and mitigation measures specifically required in this decision. Once this condition has been satisfied, the Department will issue notice to proceed with construction.		have been addressed and are summarized herein.
SC33	TIO shall set aside funds annually in a sufficient amount to allow for site observatory and access way site restoration.		Pursuant to its sublease agreement with UH, TMT developed a Decommissioning Funding Plan which calls for the establishment of a sinking fund that will cover the cost of decommissioning. At the start of operations, TMT shall set aside \$1 million annually for the 50-year life of the project.
SC34	Daytime activities at TMT will be minimized on up to four days per year, as identified by Kahu Kū Mauna.		Upon consultation with Kahu Kū Mauna the four days when TMT activity is minimized are the Winter and Summer solstices and Vernal and Autumnal equinoxes.
SC35	UHH shall consult with the Kahu Kū Mauna Council and cultural practitioners to the extent feasible to plan for, and establish, an appropriate area on Mauna Kea, within the MKSR, to be used by native Hawaiians for religious and cultural purposes; provided that this condition shall not affect the timing of TMT construction or operation.		While Kahu Kū Mauna acknowledges that the public lands on Maunakea are accessible to native Hawaiian cultural practitioners, they have begun deliberating on a set-aside area to be used specifically by native Hawaiian practitioners for the exercise of traditional and customary practices.
SC36	UHH shall allow reasonable access to the area established under Condition 35 for the exercise of any native Hawaiian traditional and customary practices to the extent feasible, reasonable, and safe. The allocation of this area shall be in addition to all other cultural and access rights of native Hawaiians to other areas of Mauna Kea as provided by law or by other conditions set forth herein .		UH Hilo acknowledges and concurs. See SC35.
SC37	In order to enhance the Hawaiian cultural presence on Mauna Kea, UHH shall include products and handicrafts with a native Hawaiian cultural theme among those sold at the Mauna Kea VIS, and explore whether an expanded area for specifically native Hawaiian crafts can be accommodated at or near the VIS.		The Visitor Information Station (VIS) sells locally made handicrafts with native Hawaiian cultural theme and continues to expand its offerings.
SC38	UHH shall implement a cooperative internship and mentorship program between personnel working at the astronomy facilities on Mauna Kea and Hawaiian communities.		Maunakea Scholars is an educational program engaging local high school students who work with mentors (primarily graduate students at UH's Institute for Astronomy) in developing astronomy research proposals.

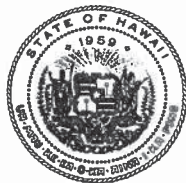
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ITEM	TASKS	PRE-CONSTRUCTION	COMMENTS
			<p>The students compete among themselves for time on the world's most powerful telescopes. This program is jointly sponsored by the Hawai'i Department of Education, Maunakea Observatories and University of Hawai'i. The program has reached over 400 high school students from all the major Hawaiian islands.</p> <p>Maunakea Observatories participate in the Akamai Workforce Initiative, which provides college students with summer internships at observatories and high- tech companies in Hawai'i. The program fosters advanced education for Hawai'i students (80 percent graduated from a Hawai'i high school or were born in Hawai'i), and increased participation of underrepresented and underserved populations in STEM.</p>
SC39	<p>UHH and TIO shall develop a plan to implement and extend early entry programs for at-risk children of Hawaiian ancestry and other at-risk youth in the community of UH Hilo. The early entry program shall provide educational opportunities in STEM-related and other curriculum such as the following:</p> <ul style="list-style-type: none"> (a) Astronomy, math, science, engineering, environmental science and technical support careers at astronomy facilities; (b) Hawaiian language and culture; (c) Navigation; (d) Geology; (e) Biology and agriculture; (f) Law Enforcement/criminal justice; (g) New disciplines of learning dependent on career fields needed; and (h) On-the-job training as necessary. <p>UHH/TIO shall report to BLNR on the progress of this condition prior to the completion of TMT construction; provided that progress on this condition or lack thereof shall not affect the construction or operation of the TMT Project and provided further that it requires no commitment for funding other than staff time for plan development.</p>		<p>UHH/OMKM and Maunakea observatories offer a number of initiatives described in this condition. Maunakea Scholars and Akamai program described in SC38 are two such examples.</p> <p>UHH has supported the development of navigation curriculum in use by Keaukaha One Youth Development and Ka Haka 'Ula Ke'elikōlani offers early immersion education at Ke Kula 'O Nāwahīkalanī'ōpu'u and develops/distributes curriculum through Hale Kuamo'o</p> <p>'Imiloa brings together members of the Hawaiian and astronomy communities to share a common vision for the future, bringing information about the cultural and natural history of Maunakea to students, teachers, our local residents, and visitors from around the world. 'Imiloa links to early Polynesian navigation history and knowledge of the night skies, and today's renaissance of Hawaiian culture and wayfinding with parallel growth of astronomy and scientific developments on Hawai'i Island. 'Imiloa has piloted a grant-funded navigation program since 2008 and is currently seeking to</p>

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ITEM	TASKS	PRE-CONSTRUCTION	COMMENTS
			<p>institutionalize this program.</p> <p>OMKM has for the past 15+ years been engaged in environmental studies including biological and physical research and survey. These programs are collaborations with UHH and Mānoa faculty, undergraduate and graduate students. Beginning in 2012 OMKM participates annually in the Pacific Internship Program for Exploring Science (PIPES) program by hiring two – three summer interns. This program is committed to increasing the recruitment and retention of local students, especially those of native Hawaiian ancestry, into fields of study, and ultimately careers, related to the natural resources of Hawai'i and The Pacific Region.</p>
SC40	UHH shall make reasonable accommodations for the use of facilities at Hale Pōhaku for the Hawaiian Language and Hawaiian Studies programs at UHH and HCC, along with their continued use by others.		Halepōhaku is available for use for educational purposes, including meetings, workshops, and retreats.
SC41	Kahu Kū Mauna shall review policies concerning the construction and retention of personal or group shrines such as 'ahu, and recommend policies to OMKM and/or BLNR as appropriate, within 18 months.		Kahu Kū Mauna developed a policy on the construction of new cultural features. This policy was approved by the Maunakea Management Board in May 2018.
SC42	UHH and OMKM are allowed to take reasonable measures consistent with law, including limitations on the use of the TMT Access Way, if necessary for the security of the TMT Observatory.		UH Hilo/OMKM acknowledges and concurs.
SC43	Other terms and conditions as may be prescribed by the Chairperson.		UH Hilo/OMKM acknowledges and concurs.

NEIL ABERCROMBIE
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF HEALTH
P. O. BOX 3378
HONOLULU, HI 96801-3378

LINDA ROSEN, M.D., M.P.H.
DIRECTOR OF HEALTH

In reply, please refer to:
EMD/CWB

06007PCTM.14

June 12, 2014

Mr. Gary Sanders
Project Manager
TMT Observatory Corporation
1200 E. California Boulevard, Mail Code 102-8
Pasadena, California 91125

Dear Mr. Sanders:

In accordance with the provisions of the Clean Water Act, Hawaii Revised Statutes, Chapter 342D; and Hawaii Administrative Rules, Chapters 11-54 and 11-55, the Department of Health (DOH), Clean Water Branch (CWB) has reviewed the following application for a National Pollutant Discharge Elimination System (NPDES) permit to discharge storm water run-off associated with construction activity:

<u>Facility</u>	<u>Permit No.</u>
Thirty Meter Telescope Observatory Mauna Kea, Island of Hawaii, Hawaii	HI S000431

The public notice of our proposed action was published in the *Honolulu Star-Advertiser* on **Thursday, May 1, 2014**, regarding the above application.

After consideration of the expressed views of all interested persons and agencies, pertinent Federal and State statutes and rules regarding the discharge, the DOH hereby issues the enclosed NPDES permit for the discharge referred to above. This action does not constitute a significant change from the tentative determination set forth in the public notice.

This permit will take effect on **June 12, 2014**.

Please complete the DOH Customer Satisfaction Survey regarding your experience in applying for this permit. This brief survey is available on the e-Permitting Portal located at: <https://eha-cloud.doh.hawaii.gov/epermit/View/home.aspx>. Please use the Application Finder button and search for the "Customer Satisfaction Survey."

EXHIBIT "C"

Mr. Gary Sanders
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06007PCTM.14

Should you have any questions, please contact the Enforcement Section or Mr. Colin Maruoka of the Engineering Section, CWB, at (808) 586-4309.

Sincerely,



STUART YAMADA, P.E., CHIEF
Environmental Management Division

CTM:tg

Enclosure: NPDES Permit

- c: Water Division (WTR-5), CWA Standards and Permits Office, EPA, Region 9
(w/encls.) [via e-mail sablad.elizabeth@epamail.epa.gov only]
- Ms. Jan Reichelderfer, PB Americas Inc.
(w/encls.) [via e-mail reichelderfer@pbworld.com only]
- Mr. Paul Gillett, TMT Observatory Corporation
(w/encls.) [via e-mail pgillett@tmt.org only]
- Mr. Jim Hayes, PB Americas Inc.
(w/encls.) [via e-mail hayesj@pbworld.com only]

PERMIT NO. HI S000431

**AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM**

In compliance with the provisions of the Clean Water Act, as amended, (33 U.S.C. §1251 et seq.; the "Act"); Hawaii Revised Statutes, Chapter 342D; and Hawaii Administrative Rules (HAR), Chapters 11-54 and 11-55, Department of Health (DOH), State of Hawaii;

TMT OBSERVATORY CORPORATION

(hereinafter PERMITTEE),

is authorized to discharge storm water associated with construction activities from the Thirty Meter Telescope (TMT) Observatory project site located at 13-North Site in Area E of the Astronomy Precinct, Mauna Kea Science Reserve and Hale Pohaku on Mauna Kea, Mauna Kea, Island of Hawaii, Hawaii, TMKs: (3) 4-004-015:009 and (3) 4-004-015:012 to the receiving State waters identified in the table below:

Discharge Point No.	Receiving State Water	Classification	Latitude (N)	Longitude (W)
1	Kemole Gulch	Class 2, Inland	19.845833°	155.500278°
2	Kuupahaa Gulch	Class 2, Inland	19.860556°	155.497500°
3	Puupohakuloa Gulch	Class 2, Inland	19.810000°	155.509444°
4	Pohakuloa Gulch	Class 2, Inland	19.787500°	155.496944°
5	Wailuku River	Class 2, Inland	19.711944°	155.307500°

in accordance with the general requirements, discharge monitoring requirements and other conditions set forth herein, and in the attached DOH "Standard NPDES Permit Conditions," that is available on the DOH, Clean Water Branch (CWB) website at <http://health.hawaii.gov/cwb/site-map/home/standard-npdes-permit-conditions/>.

All references to Title 40 of the Code of Federal Regulations (CFR) are to regulations that are in effect on July 1, 2013, except as otherwise specified. Unless otherwise specified herein, all terms are defined as provided in the applicable regulations in Title 40 of the CFR.

This permit will become effective on **June 12, 2014**.

This permit and the authorization to discharge will expire at midnight, **June 11, 2019**.

Signed this 12th day of June, 2014.


(For) Director of Health

**FINAL PERMIT
June 12, 2014**

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**ATTACHMENT:
STANDARD NPDES PERMIT CONDITIONS (VERSION 14)**

A. GENERAL REQUIREMENTS

The Permittee shall:

1. Comply with all materials submitted in and with the application, dated March 31, 2014.
2. Retain a copy of the application, including other related materials, and this permit at the job site or at a nearby field office.
3. Design, operate, implement, and maintain the project Site-Specific Best Management Practices (BMPs) Plan to ensure that storm water discharges associated with construction activities will not cause or contribute to a violation of applicable State water quality standards.
4. Implement the project Site-Specific BMPs Plan as often as needed to improve the quality of storm water discharges or when instructed by the Director of Health (Director).
5. Not cause or contribute to a violation of the basic water quality criteria as specified in HAR, Chapter 11-54, Section 11-54-4.
6. Inspect, at a minimum of once per week, the receiving state waters, storm water runoff and control measures and BMPs to detect violations of and conditions which may cause or contribute to a violation of the basic water quality criteria as specified in HAR, Chapter 11-54, Section 11-54-4 (e.g., the Permittee shall look at storm water discharges and receiving state waters for turbidity, color, floating oil and grease, floating debris and scum, materials that will settle, substances that will produce taste in the water or detectable off-flavor in fish, and inspect for items that may be toxic or harmful to human or other life).
7. Immediately stop, reduce, or modify construction, or implement new or revised BMPs as needed to stop or prevent a violation of the basic water quality criteria as specified in HAR, Chapter 11-54, Section 11-54-4.
8. Review the effectiveness and adequacy of the implemented Site-Specific BMPs Plan(s) and Erosion and Sediment Control (ESC) Plan(s) at a minimum of once per week, and update the plan as often as necessary. Any changes(s) to the Site-Specific BMPs Plans and/or ESC Plans or correction(s) to information already on file with the CWB shall be maintained onsite and be available upon request.

PART A
PERMIT NO. HI S000431
Page 4

9. Know that Mr. Paul Gillett of TMT Observatory Corporation is recognized as the duly authorized representative to submit all information/documents for compliance with the NPDES conditions. A new authorized representative may be appointed in accordance with Part B.8.

B. REPORTING REQUIREMENTS

The Permittee shall:

1. Submit the following information in accordance with Part B.8. of this permit to the CWB for review and comment **at least 30 calendar days before the start of construction activities.**

All questions/concerns that the DOH may have must be answered to the satisfaction of the CWB.

- a. The County-approved ESC Plan and/or Grading Permit.
 - b. Operator or General Contractor information
2. BMPs used for land disturbance activities shall be located upland and treat all upland pollutants prior to any discharge. These BMPs shall be designed and implemented to ensure all upland pollutants are prevented from discharging to State waters. BMPs for in-water work shall be designed and implemented to ensure compliance with all applicable WQS.
 3. Notify the Director of the construction start date in accordance with Part B.8. within seven (7) calendar days before the start of construction activities.
 4. Complete and submit the Solid Waste Disclosure Form for Construction Sites to the DOH, Solid and Hazardous Waste Branch, Solid Waste Section as specified on the form at least 30 calendar days before the start of construction activities. The form can be downloaded at:
<http://health.hawaii.gov/shwb/files/2013/06/swdiscformnov2008.pdf>.
 5. Submit any changes to information on the CWB Individual NPDES Form in accordance with Part B.8. as soon as changes arise. The Permittee shall properly address all related concerns and/or comments to the CWB's satisfaction.
 6. Immediately notify the Director of all incidences of noncompliance and identify the pollutant(s) source(s) and the proposed and implemented control or mitigative measures as required in Section 16 of the "Standard NPDES Permit Conditions".
 7. Complete and submit the Notice of Cessation in accordance with Part B.8. within 14 calendar days of completion of the subject project.

8. All reports, notifications, and updates to information on file shall be submitted through the CWB Compliance Submittal Form for Individual NPDES Permits and Notice of General Permit Coverages (NGPCs). This form is accessible through the e-Permitting Portal website at:
<https://eha-cloud.doh.hawaii.gov/epermit/View/home.aspx>. If not already registered, you will be asked to do a one-time registration to obtain your login and password. After you register, click on the Application Finder tool to locate the form. Follow the instructions to complete and submit this form. All submissions shall include a CD or DVD containing the downloaded e-Permitting submission and a completed Transmittal Requirements and Certification Statement for e-Permitting NPDES/NGPC Compliance Submissions Form, with original signature and date.
9. Include the following certification statement, NPDES permit number, and original signature on each submittal in accordance with HAR, Chapter 11-55, Section 11-55-07(b). Failure to provide this information on future correspondence or submittals may be a basis for delay of the processing of the document(s).

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment for knowing violations."

10. The Permittee shall develop and submit a facility-specific waste load allocation (WLA) implementation and monitoring plan to the Director when a Total Maximum Daily Load, which specifies WLAs applicable to the Permittee's discharge, is approved by the EPA within one (1) year of notification of the approval date.

C. BEST MANAGEMENT PRACTICES (BMPs)

1. The Permittee shall:
 - a. Refrain from performing any work during heavy rainstorms.
 - b. Prevent loose particles, sand, soil, silt, and other construction debris at the project site from being washed away by storm water runoff to drainage systems and to State waters.
 - c. Remove the excavated material as soon as possible or at the end of each work day. The excavated material shall be disposed in a State and/or County-approved landfill site.
 - d. Not discharge water used for dust control to State waters.
 - e. Not discharge water used for irrigation to State waters.
 - f. Not discharge hydrotesting effluent to State waters without an appropriate NPDES permit.
 - g. Not discharge dewatering effluent to State waters without an appropriate NPDES permit.
 - h. Not stockpile unprotected materials on-site without implementing the appropriate BMPs for the stockpile(s).
 - i. Wash-down vehicles and/or equipment and concrete truck drums only at designated areas and not discharge the wash waters to State waters. The concrete wash water shall not be allowed to infiltrate into the ground.
 - j. Assure that the implemented BMPs are effective and the discharge effluent is in compliance with the basic State water quality standards.
2. The following special conditions apply to all land disturbance work conducted under this permit:
 - a. Construction Management Techniques
 - (1) Clearing and grubbing shall be held to the minimum necessary for grading and equipment operation.

- (2) Construction shall be sequenced to minimize the exposure time of the cleared surface area.
- (3) Construction shall be staged or phased for large projects. Areas of one (1) phase shall be stabilized before another phase is initiated. Stabilization shall be accomplished by temporarily or permanently protecting the disturbed soil surface from rainfall impacts and runoff.
- (4) Erosion and Sediment Control Measures shall be in place and functional before earth moving operations begin. These measures shall be properly constructed and maintained throughout the construction period.
- (5) All control measures shall be checked and repaired as necessary, for example, weekly in dry periods and within 24 hours after any rainfall of 0.5 inches or greater within a 24-hour period. During prolonged rainfall, daily checking is necessary. The Permittee shall maintain records of checks and repairs.
- (6) The Permittee shall maintain records of the duration and estimated volume of storm water discharge(s).
- (7) A specific individual shall be designated to be responsible for erosion and sediment controls on each project site.

b. Vegetation Controls

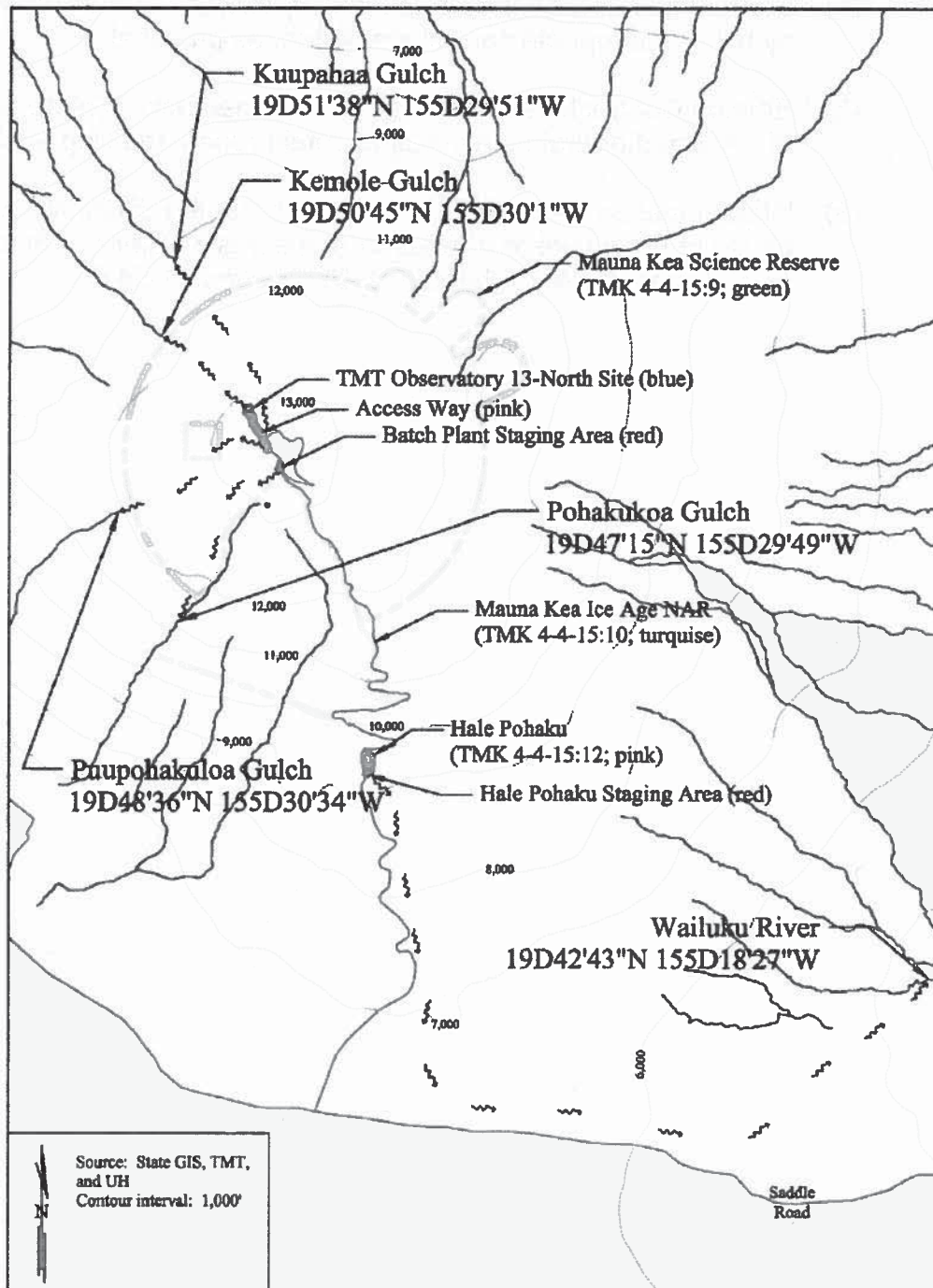
- (1) Pre-construction vegetative ground cover shall not be destroyed, removed, or disturbed more than 20 calendar days prior to land disturbance.
- (2) Temporary soil stabilization with appropriate vegetation shall be applied on areas that will remain unfinished for more than 30 calendar days.
- (3) Permanent soil stabilization with perennial vegetation or pavement shall be applied as soon as practical after final grading. Irrigation and maintenance of the perennial vegetation shall be provided for 30 calendar days or until the vegetation takes root, whichever is shorter.

c. Structural Controls

- (1) Storm water flowing toward the construction area shall be diverted by using appropriate control measures, as practical.
- (2) Erosion Control Measures shall be designed according to the size of disturbed or drainage areas to detain runoff and trap sediment.
- (3) Water must be discharged in a manner that the discharge shall not cause or contribute to a violation of the basic water quality criteria as specified in HAR, Chapter 11-54, Section 11-54-4.

S000431.FNL.14

D. MAPS



Location & Outfall Map



TRANSMITTAL REQUIREMENTS AND CERTIFICATION STATEMENT FOR E-PERMITTING INDIVIDUAL NPDES APPLICATION SUBMISSIONS

1. Submission and File Numbers

e-Permitting Submission #: HNJ-C0E1-MHW8X

I am submitting a (check only one):

☐ Initial Individual NPDES application.

☐ Revised Individual NPDES application, Permit Number: _____

☒ Renewal Individual NPDES application, Permit Number: HI S000431

2. Certification Statement

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature

Date Signed

11/16/18

Printed First and Last Name Gary Sanders

3. Transmittal Requirements (Check all.)

☒ I have read the instructions on Page 2.

☒ If I do not follow all of the instructions on Page 2, I acknowledge that:

- a. This submittal will not be accepted by the Clean Water Branch (CWB);
- b. Processing of my NPDES application will not begin;
- c. I am delaying the processing of my NPDES application; and
- d. The CWB may deny my request for NPDES permit coverage with or without prejudice.

☒ The signature provided in Item No. 2 is an original signature.

☒ My CD or DVD is attached. This CD or DVD contains only the downloaded e-Permitting submission identified in Item No. 1 above. I have not altered this file.

4. Filing Fee [Check the applicable box(es).]

☐ A \$1000 check made payable to the State of Hawaii is attached.

☒ The filing fee was paid online through the e-Permitting Portal.

☐ I am submitting a revised Individual NPDES application. My filing fee has already been paid under the initial submittal.

☐ I am a State agency, and I am requesting a Bill for Collection.

IMPORTANT INSTRUCTIONS:

You are required to follow these instructions to complete your e-Permitting Individual NPDES application initial, revised, or renewal submittal. Failure to follow all of these instructions will delay the processing of your submittal and may result in the denial of your request for NPDES permit coverage. **Processing of your submission will not begin until the Clean Water Branch (CWB) receives all of the items below.**

Item No. 1 – Submission and File Numbers

- a. Enter your e-Permitting Submission #. You may find your unique e-Permitting Submission # (e.g. 15H-ZGVV-421H) in your History Link of the e-Permitting Portal. If you are submitting a revised Individual NPDES application, the e-Permitting Submission # will contain the version (e.g. 15H-ZGVV-421H, v1).
- b. Check only one (1) box to indicate if you are submitting an Initial Individual NPDES application (new submittal), a Revised Individual NPDES application (revised submittal to address CWB comments), or a Renewal Individual NPDES application (submittal to renew existing Individual NPDES permit coverage).
- c. Enter your permit number if you are revising an Initial Individual NPDES application to respond to CWB comments. The CWB comments will contain the permit number. You will not need to provide a permit number if you are submitting an Initial Individual NPDES application.

Item No. 2 – Certification Statement

- a. This is the certification statement for the e-Permitting submission # identified in Item No. 1.
- b. Enter the Printed First and Last Name.
 - i. For initial and renewal submittals, the Printed First and Last Name must be the Certifying Person identified in Section No. 2 of the e-Permitting Individual NPDES application form.
 - ii. For revised submittals, the Printed First and Last Name may be either the Certifying Person identified in Section No. 2 of the e-Permitting Individual NPDES application form or the duly authorized representative identified in Section No. 8 of the e-Permitting Individual NPDES form.
- c. Enter the Date Signed.
- d. Provide an original Certification signature (hard copy of this form).
Someone else may sign "for" the individual listed in the Printed First and Last Name.

Item No. 3 – Transmittal Requirements

- a. You are required to check all of the boxes.
- b. Provide a CD or DVD containing the e-Permitting submission in PDF or ZIP.
To download the submission, click on the History Link in the e-Permitting Portal (after you submitted the application). Locate your submission and press the view button under the Action column. Then you may either:
 - i. Press the Print button, scan the document, save the document as a PDF, and save the PDF and all your attachments on the CD or DVD; or
 - ii. Press the Print Screen button on your keyboard, paste the image into a text editor (e.g. MS Word), convert the text file as a PDF, and save the PDF and all your attachments on the CD or DVD; or
 - iii. Press the Download Submission button. A PDF file will be generated if you have no attachments. A ZIP file will be created if you have attachments. Save the PDF or ZIP file on the CD or DVD.

Do not add additional files to the CD or DVD. Your CD or DVD shall match your e-Permitting submission #.

Item No. 4 – Filing Fee

- a. You are required to check only one (1) of the boxes.
- b. A \$1000 filing fee is required for all Initial Individual NPDES applications.
- c. A \$1000 filing fee is required for all Renewal Individual NPDES applications.
- d. If you are a State agency, you may request a Bill for Collection even if paying online.

Additional

- a. Mail or deliver this form and all attachments to the Department of Health, Clean Water Branch, Hale Ola, Room 225, 2827 Waimano Home Road, Pearl City, Oahu, Hawaii 96782.



P L A N N I N G
S O L U T I O N S

November 29, 2018

Department of Health
Clean Water Branch
Hale Ola Building, Room 225
2827 Waimano Home Road
Pearl City, Hawai'i 96782

Subject: e-Permitting Submittal # HNJ-C0E1-MHW8X
Notice of Intent, Form C, Individual Permit Renewal
Thirty Meter Telescope
Maunakea, Hawai'i

Dear Sir or Madam:

Please find enclosed the required certification statement and DVD containing the downloaded submission from the e-Permitting portal. The permit fee has been paid on-line.

If you have any questions or require additional items, please contact me at 550-4559. Planning Solutions, Inc. and the TMT International Observatory appreciate your attention to this matter.

Sincerely,

Jim Hayes
Principal Planner

Enclosures:

Certification Statement
DVD

cc: Paul Gillett, via electronic mail

Summary

Submission #:	HNJ-C0E1-MHW8X	Date Submitted:	11/29/2018 3:01 PM
Form:	version (CWB Individual NPDES Form)	Status:	Submitted
Submitted By:	James T Hayes	Submission Creator:	James T Hayes
Active Steps:	Assign To		
File/Reference #:		Reference #:	
Description:	CWB Individual NPDES Form		

Notes

There are currently no Submission Notes.

Details

1a. New NPDES Application

I read HAR, Chapters 11-54 and 11-55. I certify that I am submitting this NPDES application since my project/facility/activity/discharge and my organization will comply with these rules and the NPDES Permit that the DOH may issue for my project/facility/activity/discharge. I certify that I will design, implement, operate, and maintain appropriate treatment/controls to ensure that my activity/discharge will not violate HAR, Chapters 11-54 and 11-55.

Yes.

Is your submission for a new NPDES permit (Initial Individual NPDES permit application or a Revised Individual NPDES permit application)?

No, my submission is a Renewal Individual NPDES application.

If you selected "Yes" above, please complete the rest of this section. Skip Section 1b and proceed to Section 2. If you selected "No" above, please skip the remainder of this section and proceed to Section 1.b.

NPDES permits cannot be issued for "after the fact" discharges/activities. For new NPDES applications, you are required to certify below that the information provided in this NPDES application does not include "after the fact" discharges/activities.

NONE PROVIDED

You are required to report any discharges/activities associated with your project/facility that started before obtaining NPDES permit coverage. This only applies to discharges to State waters and activities that require NPDES permit coverage [e.g. construction activities that disturb one (1) acre or more]. Please select one (1) of the options below.

NONE PROVIDED

I certify under penalty of law that my proposed discharge will not impair any State water (including but not limited to rivers, streams, wetlands, ponds, ground waters, and ocean), Native Hawaiian cultural resources (including but not limited to burial sites/iwi, heiau, and taro loi), or the exercise of traditional Native Hawaiian cultural practices

Yes. I certify.

If you answered No above, describe the step(s) you will take to reasonably protect those State waters, Native Hawaiian resources, or exercise of traditional Native Hawaiian cultural practices. Please only include the steps that have been accepted by the Office of Hawaiian Affairs and other appropriate agencies. Note: It is your responsibility under the Constitution of the State of Hawaii to mitigate any impacts.

NONE PROVIDED

1b. Renewal NPDES Application

Provide the previously assigned Permit Number (e.g. HI0021841).

HIS000431

Historic Effluent Limitations and Monitoring Data Spreadsheet

You are required to download and complete the Historic Effluent Limitations and Monitoring Data Spreadsheet below only if your NPDES permit contains numeric effluent limitations. This does not apply to NPDES permits for discharges of storm water associated with construction activities.

[Historic Effluent Limitations and Monitoring Data Spreadsheet](#)

Upload Completed Historic Effluent Limitations and Monitoring Data Spreadsheet- Attachment

NONE PROVIDED

Comment: NONE PROVIDED

Provide a summary of all DOH-CWB and/or U.S. EPA inspections conducted at your facility during the current permit term. Include the inspection date, findings, and all corrective actions. This applies to all NPDES permits.

None

Please report all of your existing NPDES permit submittal requirements. List the required submittal (e.g. DMR, Nutrient Management Plan, BMP Plan, TRE/TIE, etc.); the due date; and your submittal date. This applies to all NPDES permits.

Condition B.1.a. The County-approved ESC Plan and/or Grading Permit; no due date; submitted 8/13/14. Condition B.1.b. Operator or General Contractor information; no due date; submitted 8/12/14. Condition B.3. Notification of Start; no due date; submitted 9/11/2014. Condition B.4. Solid Waste Disclosure Form for Construction Sites; no due date; submitted 8/14/14. Condition B.10. Waste Load Allocation (WLA) Implementation and Monitoring Plan; no due date; has not been submitted (TMDLs have not been established for the project area so this requirement has not been triggered).

Effluent Violation Spreadsheet

You are required to download and complete the Effluent Violation Spreadsheet below only if your NPDES permit contains numeric effluent limitations. This does not apply to NPDES permits for discharges of storm water associated with construction activities.

[Effluent Violation Spreadsheet](#)

Upload Completed Effluent Violation Spreadsheet- Attachment

NONE PROVIDED

Comment: NONE PROVIDED

Please describe all actions you have taken to prevent all of the violations above from occurring again. You are required to provide this information with your renewal application. The DOH-CWB will take this into consideration when deciding whether to renew your permit or deny your renewal application. Pursuant to HAR 11-55-17, noncompliance by the Permittee with any conditions of the NPDES permit is grounds for denial of the renewal NPDES application.

NONE PROVIDED

2. Owner Information

Owner Legal Name

TMT International Observatory

Owner Department

NONE PROVIDED

Owner Division

NONE PROVIDED

Owner Mailing Address

100 West Walnut Street, Suite 300

Pasadena, CA 921124

Owner's Street Address

100 West Walnut Street, Suite 300
Pasadena, CA 91124

Owner Type

Industrial - Private Project

Signatory Type

The person certifying this NPDES application must meet one of the following descriptions and be employed by the Owner. Please identify your appropriate signatory type based on the items listed below.

State Agency: I certify that for a state agency, I am a principal executive officer or ranking elected official.

Municipal Agency: I certify that for a municipal agency, I am a principal executive officer or ranking elected official.

Non-Federal Public Agency: I certify that for a non-federal public agency, I am a principal executive officer or ranking elected official.

Federal Agency: I certify that for a federal agency, I am the chief executive officer of the agency, or I am the senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

Partnership: I certify that I am a general partner for a partnership.

Proprietorship: I certify that I am the proprietor for a sole proprietorship.

Corporation Officer: I certify that for a corporation, I am the President, Vice President, Secretary, or Treasurer of the corporation and in charge of a principal business function, or I perform similar policy or decision-making functions for the corporation.

Corporation Manager: I certify that for a corporation, I am the Manager of one or more manufacturing, production, or operating facilities and am authorized to make management decisions which govern the operation of the regulated facility or facilities including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations. I can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements and authority to sign documents has been assigned or delegated to me in accordance with corporate procedures.

Trust: I certify that for a trust, I am a trustee.

LLC: I certify that for a limited liability company (LLC), I am the Manager or a Member authorized to make management decisions for the LLC and am in charge of a principal business function, or I perform similar policy or decisionmaking functions for the LLC.

Please Select the Signatory Type based on the above descriptions.

Corporation Manager

Certifying Person Salutation

Mr.

Certifying Person First Name

Gary

Certifying Person Last Name

Sanders

Certifying Person Title

Project Manager

Certifying Person Email Address

sanders@tmt.org

Certifying Person Phone Number (e.g., 555-555-5555)

626-395-2997

Certifying Person Alternate Phone Number (cell) (e.g., 555-555-5555)

808-896-6963

Certifying Person Fax Number (e.g., 555-555-5555)

626-296-1887

The Owner's contact person may be the staff person with direct responsibility for the facility or project, not necessarily the certifying or "responsible" person.

Owner Contact Person's Salutation

Mr.

Owner Contact Person's First Name

Paul

Owner Contact Person's Last Name

Gillett

Owner Contact Person's Position Title

Facilities Department Head

Owner Contact Person's Email

pgillett@tmt.org

Owner Contact Person's Phone number (e.g., 555-555-5555)

626-395-1654

Owner Contact Person's Alternate Phone Number (cell) (e.g., 555-555-5555)

808-315-2587

Owner Contact Person's Fax number (e.g., 555-555-5555)

626-296-1887

3. Operator or General Contractor Contact Information

Will Operator or General Contractor information be submitted at least 30 calendar days before the start of construction activities?

No (operator/general contractor information is provided below)

Operator/General Contractor Legal name

Goodfellow Bros., LLC

Operator/General Contractor Department

NONE PROVIDED

Operator/General Contractor Division

NONE PROVIDED

Operator/General Contractor Mailing address

P.O. Box 383729
Waikoloa, HI 96738

Operator/General Contractor Street address:

68-1244 Waikoloa Road
Waikoloa, HI 96738

Operator/General Contractor Contact Person's Salutation

Mr.

Operator/General Contractor Contact Person's First Name

John

Operator/General Contractor Contact Person's Last Name

Makoff

Operator/General Contractor Contact Person's Position Title

Regional Manager

Operator/General Contractor Contact Person's Email

johnm@goodfellowbros.com

Operator/General Contractor Contact Person's Phone number (e.g., 555-555-5555)

808-887-6511

Operator/General Contractor Contact Person's Alternate Phone Number (cell) (e.g., 555-555-5555)

808-960-4648

Operator/General Contractor Contact Person's Fax number (e.g., 555-555-5555)

808-887-6522

4. Facility/Project Information

Enter the Facility or Project Name

The Facility or Project Name will appear on all correspondence, official files, and permits.

Facility or Project Name

TMT International Observatory

Provide the Mailing Address

The mailing address may be the mailing address of the facility/s or project's contact person.

Mailing Address

100 West Walnut Street, Suite 300
Pasadena, CA 91124

Provide the Street Address

The street address is the facility or project location with respect to identifiable street names or adjacent developments or properties (i.e., 1234 15th Drive or northwest corner of 1st Street and X Avenue).

Street Address (i.e. the location of the project or facility)

Mauna Kea Summit Loop Road, Area E

Provide the Facility/Project Contact Person information.

Provide the facility/project contact person information. The facility/project contact person can be anyone (e.g. consultant, staff, etc.).

Facility/Project Contact Person Salutation

Mr.

Facility/Project Contact Person's First Name

John

Facility/Project Contact Person's Last Name

Makoff

Facility/Project Contact Person's Title

Regional Manager

Facility/Project Contact Person's Email

johnm@goodfellowbros.com

Facility/Project Contact Person Phone Number (e.g., 555-555-5555)

808-887-6511

Facility/Project Contact Person Alternate Phone Number (cell) (e.g., 555-555-5555)

808-960-4648

Facility/Project Contact Person Fax Number (e.g., 555-555-5555)

808-887-6522

Facility/Project Front Gate Location Coordinates or Start of Linear Construction Location Coordinates

19.82769937757558,-155.47941337260704
NONE PROVIDED

5. Tax Map Key (TMK) No.

Facility/Project Tax Map Key (TMK) Number(s)

You are required to download and complete the TMK spreadsheet below. All TMK numbers involved in the facility/project need to be disclosed. A minimum of one (1) TMK is required.

[TMK Spreadsheet](#)

Upload Completed TMK Spreadsheet- Attachment

TMK NPDES Spreadsheet-TMT.xlsx - 11/16/2018 03:29 PM

Comment: NONE PROVIDED

6. Receiving State Water(s) Information (1)

HAR, Section 11-54-1 defines State waters as: All waters, fresh, brackish, or salt around and within the State, including, but not limited to, coastal waters, streams, rivers, drainage ditches, ponds, reservoirs, canals, and lakes; provided that drainage ditches, ponds, and reservoirs required as part of a water pollution control system are excluded. This chapter applies to all state waters, including wetlands, subject to the following exceptions: (1) This chapter does not apply to groundwater. (2) This chapter does not apply to ditches, flumes, ponds and reservoirs that are required as part of a water pollution control system. (3) This chapter does not apply to ditches, flumes, ponds, and reservoirs that are used solely for irrigation and do not overflow into any other state waters, unless such ditches, flumes, ponds, and reservoirs are waters of the United States as defined at 40 C.F.R. 122.2.

A receiving State water is the first State water that receives the discharge. Note: You must identify a receiving State Water before an NPDES permit can be issued. Identify the receiving State water name in relation to the facility or project site based on the topography or contours of the land, excluding evaporation, percolation, retention, detention, etc. The receiving State water must be a surface water. Sample responses for this item include: Pacific Ocean at Sandy Beach, Honolulu Harbor, Pearl Harbor, Aiea Stream, Unnamed Stream Kaloi Gulch, Unnamed Dry Gulch, Unnamed Wetlands, etc.

Receiving State Waters Name

Kemole Gulch

Select the receiving State water CLASSIFICATION:

Classifications are defined in HAR, Chapter 11-54 and on the Water Quality Standards Maps available on the CWB website. The Water Quality Standards Maps are provided for general information only and are to be used in conjunction with HAR, Chapter 11-54. Click on the link below to download a copy of HAR, Chapter 11-54.

[HAR, Chapter 11-54](#)

The Water Quality Standards Maps can be found by clicking on the link below.

[Water Quality Standards Maps](#)

Receiving State Water Classification

Class 2, Inland

Coordinates of the Discharge Point into State waters

Provide the coordinates of the discharge point (in decimal degrees) where discharge from the facility or construction site first enters the receiving State water. If the discharge first enters a storm drainage system, provide the discharge point coordinates for the outfall where the storm drainage system enters State waters. If the storm water discharge enters the receiving State water as a sheet flow, provide the coordinates based on the limits of discharge. For Example: Type: Discharge Point 1 (From) Latitude 21.274685 N, Longitude 158.012768 W (Click the "+" button in the tab heading row above to enter the next location) Then type: Discharge Point 1 (To) Latitude 21.304811 N, Longitude 158.022721 W

Properly label the discharge points with numbers (i.e., Discharge Point No. 1, Discharge Point No. 2, etc.) which correspond to the location map(s) and flow chart(s) submitted.

Discharge Point label

Kemole Gulch

Discharge Point

19.846013436267245,-155.5002144512972

NONE PROVIDED

List all discharges at this discharge point (e.g. storm water associated with construction activities; storm water associated with industrial activities; hydrotesting waters; dewatering effluent; cooling water; secondary treated wastewater effluent; etc.).

storm water associated with construction activities

Is the receiving State water on the Section 303(d) List?

Click on the link below to view the Section 303(d) List.

[Section 303\(d\) List](#)

Is the receiving State water on the Section 303(d) List?

No

If your Receiving Water is on the Section 303(d) List, please provide the impairment pollutant(s).

NONE PROVIDED

Are there additional discharge points into receiving State waters?

Yes

If YES was selected, click the "+" button in the tab area at the top of this section to describe additional discharge points into receiving State waters.

6. Receiving State Water(s) Information (2)

HAR, Section 11-54-1 defines State waters as: All waters, fresh, brackish, or salt around and within the State, including, but not limited to, coastal waters, streams, rivers, drainage ditches, ponds, reservoirs, canals, and lakes; provided that drainage ditches, ponds, and reservoirs required as part of a water pollution control system are excluded. This chapter applies to all state waters, including wetlands, subject to the following exceptions: (1) This chapter does not apply to groundwater. (2) This chapter does not apply to ditches, flumes, ponds and reservoirs that are required as part of a water pollution control system. (3) This chapter does not apply to ditches, flumes, ponds, and reservoirs that are used solely for irrigation and do not overflow into any other state waters, unless such ditches, flumes, ponds, and reservoirs are waters of the United States as defined at 40 C.F.R. 122.2.

A receiving State water is the first State water that receives the discharge. Note: You must identify a receiving State Water before an NPDES permit can be issued. Identify the receiving State water name in relation to the facility or project site based on the topography or contours of the land, excluding evaporation, percolation, retention, detention, etc. The receiving State water must be a surface water. Sample responses for this item include: Pacific Ocean at Sandy Beach, Honolulu Harbor, Pearl Harbor, Aiea Stream, Unnamed Stream Kaloi Gulch, Unnamed Dry Gulch, Unnamed Wetlands, etc.

Receiving State Waters Name

Kuupahaa Gulch

Select the receiving State water CLASSIFICATION:

Classifications are defined in HAR, Chapter 11-54 and on the Water Quality Standards Maps available on the CWB website. The Water Quality Standards Maps are provided for general information only and are to be used in conjunction with HAR, Chapter 11-54. Click on the link below to download a copy of HAR, Chapter 11-54.

[HAR, Chapter 11-54](#)

The Water Quality Standards Maps can be found by clicking on the link below.

[Water Quality Standards Maps](#)

Receiving State Water Classification

Class 2, Inland

Coordinates of the Discharge Point into State waters

Provide the coordinates of the discharge point (in decimal degrees) where discharge from the facility or construction site first enters the receiving State water. If the discharge first enters a storm drainage system, provide the discharge point coordinates for the outfall where the storm drainage system enters State waters. If the storm water discharge enters the receiving State water as a sheet flow, provide the coordinates based on the limits of discharge. For Example: Type: Discharge Point 1 (From) Latitude 21.274685 N, Longitude 158.012768 W (Click the "+" button in the tab heading row above to enter the next location) Then type: Discharge Point 1 (To) Latitude 21.304811 N, Longitude 158.022721 W

Properly label the discharge points with numbers (i.e., Discharge Point No. 1, Discharge Point No. 2, etc.) which correspond to the location map(s) and flow chart(s) submitted.

Discharge Point label

Kuupahaa Gulch

Discharge Point

19.860556,-155.4975

NONE PROVIDED

List all discharges at this discharge point (e.g. storm water associated with construction activities; storm water associated with industrial activities; hydrotesting waters; dewatering effluent; cooling water; secondary treated wastewater effluent; etc.).

Storm water associated with construction activities

Is the receiving State water on the Section 303(d) List?

Click on the link below to view the Section 303(d) List.

[Section 303\(d\) List](#)

Is the receiving State water on the Section 303(d) List?

No

If your Receiving Water is on the Section 303(d) List, please provide the impairment pollutant(s).

NONE PROVIDED

Are there additional discharge points into receiving State waters?

Yes

If YES was selected, click the "+" button in the tab area at the top of this section to describe additional discharge points into receiving State waters.

6. Receiving State Water(s) Information (3)

HAR, Section 11-54-1 defines State waters as: All waters, fresh, brackish, or salt around and within the State, including, but not limited to, coastal waters, streams, rivers, drainage ditches, ponds, reservoirs, canals, and lakes; provided that drainage ditches, ponds, and reservoirs required as part of a water pollution control system are excluded. This chapter applies to all state waters, including wetlands, subject to the following exceptions: (1) This chapter does not apply to groundwater. (2) This chapter does not apply to ditches, flumes, ponds and reservoirs that are required as part of a water pollution control system. (3) This chapter does not apply to ditches, flumes, ponds, and reservoirs that are used solely for irrigation and do not overflow into any other state waters, unless such ditches, flumes, ponds, and reservoirs are waters of the United States as defined at 40 C.F.R. 122.2.

A receiving State water is the first State water that receives the discharge. Note: You must identify a receiving State Water before an NPDES permit can be issued. Identify the receiving State water name in relation to the facility or project site based on the topography or contours of the land, excluding evaporation, percolation, retention, detention, etc. The receiving State water must be a surface water. Sample responses for this item include: Pacific Ocean at Sandy Beach, Honolulu Harbor, Pearl Harbor, Aiea Stream, Unnamed Stream Kaloi Gulch, Unnamed Dry Gulch, Unnamed Wetlands, etc.

Receiving State Waters Name

Puupohakuloa Gulch

Select the receiving State water CLASSIFICATION:

Classifications are defined in HAR, Chapter 11-54 and on the Water Quality Standards Maps available on the CWB website. The Water Quality Standards Maps are provided for general information only and are to be used in conjunction with HAR, Chapter 11-54. Click on the link below to download a copy of HAR, Chapter 11-54.

[HAR, Chapter 11-54](#)

The Water Quality Standards Maps can be found by clicking on the link below.

[Water Quality Standards Maps](#)

Receiving State Water Classification

Class 2, Inland

Coordinates of the Discharge Point into State waters

Provide the coordinates of the discharge point (in decimal degrees) where discharge from the facility or construction site first enters the receiving State water. If the discharge first enters a storm drainage system, provide the discharge point coordinates for the outfall where the storm drainage system enters State waters. If the storm water discharge enters the receiving State water as a sheet flow, provide the coordinates based on the limits of discharge. For Example: Type: Discharge Point 1 (From) Latitude 21.274685 N, Longitude 158.012768 W (Click the "+" button in the tab heading row above to enter the next location) Then type: Discharge Point 1 (To) Latitude 21.304811 N, Longitude 158.022721 W

Properly label the discharge points with numbers (i.e., Discharge Point No. 1, Discharge Point No. 2, etc.) which correspond to the location map(s) and flow chart(s) submitted.

Discharge Point label

Puupohakuloa Gulch

Discharge Point

19.809768947346164,-155.50930258752993

NONE PROVIDED

List all discharges at this discharge point (e.g. storm water associated with construction activities; storm water associated with industrial activities; hydrotesting waters; dewatering effluent; cooling water; secondary treated wastewater effluent; etc.).

Storm water associated with construction activities

Is the receiving State water on the Section 303(d) List?

Click on the link below to view the Section 303(d) List.

[Section 303\(d\) List](#)

Is the receiving State water on the Section 303(d) List?

No

If your Receiving Water is on the Section 303(d) List, please provide the impairment pollutant(s).

NONE PROVIDED

Are there additional discharge points into receiving State waters?

Yes

If YES was selected, click the "+" button in the tab area at the top of this section to describe additional discharge points into receiving State waters.

6. Receiving State Water(s) Information (4)

HAR, Section 11-54-1 defines State waters as: All waters, fresh, brackish, or salt around and within the State, including, but not limited to, coastal waters, streams, rivers, drainage ditches, ponds, reservoirs, canals, and lakes; provided that drainage ditches, ponds, and reservoirs required as part of a water pollution control system are excluded. This chapter applies to all state waters, including wetlands, subject to the following exceptions: (1) This chapter does not apply to groundwater. (2) This chapter does not apply to ditches, flumes, ponds and reservoirs that are required as part of a water pollution control system. (3) This chapter does not apply to ditches, flumes, ponds, and reservoirs that are used solely for irrigation and do not overflow into any other state waters, unless such ditches, flumes, ponds, and reservoirs are waters of the United States as defined at 40 C.F.R. 122.2.

A receiving State water is the first State water that receives the discharge. Note: You must identify a receiving State Water before an NPDES permit can be issued. Identify the receiving State water name in relation to the facility or project site based on the topography or contours of the land, excluding evaporation, percolation, retention, detention, etc. The receiving State water must be a surface water. Sample responses for this item include: Pacific Ocean at Sandy Beach, Honolulu Harbor, Pearl Harbor, Aiea Stream, Unnamed Stream Kaloi Gulch, Unnamed Dry Gulch, Unnamed Wetlands, etc.

Receiving State Waters Name

Pohakuloa Gulch

Select the receiving State water CLASSIFICATION:

Classifications are defined in HAR, Chapter 11-54 and on the Water Quality Standards Maps available on the CWB website. The Water Quality Standards Maps are provided for general information only and are to be used in conjunction with HAR, Chapter 11-54. Click on the link below to download a copy of HAR, Chapter 11-54.

[HAR, Chapter 11-54](#)

The Water Quality Standards Maps can be found by clicking on the link below.

[Water Quality Standards Maps](#)

Receiving State Water Classification

Class 2, Inland

Coordinates of the Discharge Point into State waters

Provide the coordinates of the discharge point (in decimal degrees) where discharge from the facility or construction site first enters the receiving State water. If the discharge first enters a storm drainage system, provide the discharge point coordinates for the outfall where the storm drainage system enters State waters. If the storm water discharge enters the receiving State water as a sheet flow, provide the coordinates based on the limits of discharge. For Example: Type: Discharge Point 1 (From) Latitude 21.274685 N, Longitude 158.012768 W (Click the "+" button in the tab heading row above to enter the next location) Then type: Discharge Point 1 (To) Latitude 21.304811 N, Longitude 158.022721 W

Properly label the discharge points with numbers (i.e., Discharge Point No. 1, Discharge Point No. 2, etc.) which correspond to the location map(s) and flow chart(s) submitted.

Discharge Point label

Pohakuloa Gulch

Discharge Point

19.875692,-155.496944

NONE PROVIDED

List all discharges at this discharge point (e.g. storm water associated with construction activities; storm water associated with industrial activities; hydrotesting waters; dewatering effluent; cooling water; secondary treated wastewater effluent; etc.).

Storm water associated with construction activities

Is the receiving State water on the Section 303(d) List?

Click on the link below to view the Section 303(d) List.

[Section 303\(d\) List](#)

Is the receiving State water on the Section 303(d) List?

No

If your Receiving Water is on the Section 303(d) List, please provide the impairment pollutant(s).

NONE PROVIDED

Are there additional discharge points into receiving State waters?

Yes

If YES was selected, click the "+" button in the tab area at the top of this section to describe additional discharge points into receiving State waters.

6. Receiving State Water(s) Information (5)

HAR, Section 11-54-1 defines State waters as: All waters, fresh, brackish, or salt around and within the State, including, but not limited to, coastal waters, streams, rivers, drainage ditches, ponds, reservoirs, canals, and lakes; provided that drainage ditches, ponds, and reservoirs required as part of a water pollution control system are excluded. This chapter applies to all state waters, including wetlands, subject to the following exceptions: (1) This chapter does not apply to groundwater. (2) This chapter does not apply to ditches, flumes, ponds and reservoirs that are required as part of a water pollution control system. (3) This chapter does not apply to ditches, flumes, ponds, and reservoirs that are used solely for irrigation and do not overflow into any other state waters, unless such ditches, flumes, ponds, and reservoirs are waters of the United States as defined at 40 C.F.R. 122.2.

A receiving State water is the first State water that receives the discharge. Note: You must identify a receiving State Water before an

NPDES permit can be issued. Identify the receiving State water name in relation to the facility or project site based on the topography or contours of the land, excluding evaporation, percolation, retention, detention, etc. The receiving State water must be a surface water. Sample responses for this item include: Pacific Ocean at Sandy Beach, Honolulu Harbor, Pearl Harbor, Aiea Stream, Unnamed Stream Kaloi Gulch, Unnamed Dry Gulch, Unnamed Wetlands, etc.

Receiving State Waters Name

Wailuku River

Select the receiving State water CLASSIFICATION:

Classifications are defined in HAR, Chapter 11-54 and on the Water Quality Standards Maps available on the CWB website. The Water Quality Standards Maps are provided for general information only and are to be used in conjunction with HAR, Chapter 11-54. Click on the link below to download a copy of HAR, Chapter 11-54.

[HAR, Chapter 11-54](#)

The Water Quality Standards Maps can be found by clicking on the link below.

[Water Quality Standards Maps](#)

Receiving State Water Classification

Class 2, Inland

Coordinates of the Discharge Point into State waters

Provide the coordinates of the discharge point (in decimal degrees) where discharge from the facility or construction site first enters the receiving State water. If the discharge first enters a storm drainage system, provide the discharge point coordinates for the outfall where the storm drainage system enters State waters. If the storm water discharge enters the receiving State water as a sheet flow, provide the coordinates based on the limits of discharge. For Example: Type: Discharge Point 1 (From) Latitude 21.274685 N, Longitude 158.012768 W (Click the "+" button in the tab heading row above to enter the next location) Then type: Discharge Point 1 (To) Latitude 21.304811 N, Longitude 158.022721 W

Properly label the discharge points with numbers (i.e., Discharge Point No. 1, Discharge Point No. 2, etc.) which correspond to the location map(s) and flow chart(s) submitted.

Discharge Point label

Wailuku River

Discharge Point

19.711944,-155.3075
NONE PROVIDED

List all discharges at this discharge point (e.g. storm water associated with construction activities; storm water associated with industrial activities; hydrotesting waters; dewatering effluent; cooling water; secondary treated wastewater effluent; etc.).

Storm water associated with construction activities

Is the receiving State water on the Section 303(d) List?

Click on the link below to view the Section 303(d) List.

[Section 303\(d\) List](#)

Is the receiving State water on the Section 303(d) List?

Yes

If your Receiving Water is on the Section 303(d) List, please provide the impairment pollutant(s).

NO3+NO2

Are there additional discharge points into receiving State waters?

No

If YES was selected, click the "+" button in the tab area at the top of this section to describe additional discharge points into receiving

State waters.

7. Receiving Drainage System(s) Information (1)

Does the discharge enter a **STORMWATER DRAINAGE SYSTEM** before discharging into the receiving State waters?

No

If YES selected, provide the information for ALL of the following questions in this section.

Drainage System Owner's Name

NONE PROVIDED

Drainage System Owner's Approval

Please submit the Drainage System owner's approval to allow the subject discharge to enter their Drainage System. If the project owner also owns the Drainage System, you do not have to submit the approval.

Drainage System Owner's Approval to Discharge- Attachment

NONE PROVIDED

Comment: NONE PROVIDED

Please note that if you did not attach the Drainage System Owner's Approval to this application, you are required to submit the Approval to Discharge at least 30 calendar days before the start of construction activities or discharge, whichever is sooner.

Will Drainage System Owner's approval be submitted at least 30 calendar days before start of construction?

NONE PROVIDED

If the Drainage System Owner is the same as the Owner of this Project, please select one of the following.

NONE PROVIDED

Are there additional Drainage Systems that may receive stormwater runoff from the project?

NONE PROVIDED

If YES was selected, click the "+" button in the tab area at the top of this section to provide additional Receiving Drainage System information.

8. Authorized Representative

Authorization

The Certifying Person hereby authorizes the named individual or any individual occupying the named position of the company/organization listed below to act as our representative to submit information/documents necessary to complete the NPDES application to discharge to State waters from the subject facility. Our representative is further authorized to submit information/documents for compliance with the NPDES permit conditions, except submittal of the Notice of Cessation (NOC). The Owner hereby agrees to comply with and be responsible for all NPDES permit conditions. This authorization begins with NPDES application processing and ends upon receipt of the NOC by the CWB. The Owner authorizes the duly authorized representative to submit additional information/documents necessary to complete the NPDES application and to submit information/documents to comply with the NPDES permit conditions. The Owner is responsible for all information/documents submitted by the duly authorized representative for completion of the NPDES application and for compliance with the NPDES permit conditions. The Certifying Person is required to sign the NOC Form for the project. After receipt of the NOC for the project, the duly authorized representative is no longer recognized by the CWB. The responsibility of the authorized representative cannot be delegated to an outside consultant with no financial responsibility for the company - they cannot sign as the "authorized representative" on behalf of the Owner. This requirement stems from the fact that self-reporting is critical under the Clean Water Act and Hawaii Water Pollution statutes; reports filed with CWB can have serious legal consequences, including possible civil and even criminal liability. The Owner in signing reports, therefore, must be represented by someone who has some responsibility for the corporation's financial interests.

The Certifying Person attests that the authorized representative 1) meets the requirements of HAR 11-55-07(b) and 2) has

financial responsibility within the corporation/organization who can attest to the accuracy of reports either because he or she participated in the preparation of the report, or supervises those who did prepare it and can attest that those individuals followed standard protocols that ensure the accuracy of the report. Both the Certifying Person and authorized representative understand that they can be subject to civil and criminal liability for non-compliance with NPDES permit conditions, non-compliance with HAR Chapters 11-54 and 11-55, and for falsifying information.

Yes. I certify that the above is true.

Authorized Representative Contact Information

Complete the following for your Authorized Representative.

Authorized Representative Company/Organization Name

Goodfellow Bros., LLC

Authorized Representative Department

NONE PROVIDED

Authorized Representative Division

NONE PROVIDED

Authorized Representative Mailing Address

P.O. Box 383729
Waikoloa, HI 96738

Authorized Representative Street Address

68-1244 Waikoloa Road
Waikoloa, HI 96738

Authorized Representative First Name

John

Authorized Representative Salutation

Mr.

Authorized Representative Last Name

Mahoff

Authorized Representative Email Address

johnm@goodfellowbros.com

Authorized Representative Phone (e.g., 555-555-5555)

808-887-6511

Authorized Representative Alternate Phone (cell) (e.g., 555-555-5555)

808-960-4648

Authorized Representative Fax (e.g., 555-555-5555)

808-887-6522

9. Discharge Specific Attachments

a. Please select the form(s) for the discharge/activity you are requesting NPDES permit coverage. You may cover multiple discharges under one (1) NPDES permit application.

Form C - Discharges of storm water associated with construction activities.

b. Download and complete appropriate form(s).

For all of the discharges/activities you are requesting NPDES permit coverage (Section 9.a above), please download and complete all

of the appropriate forms (Section 9.d below).

c. Upload completed form(s).- Attachment

NOIFormC-TMT.pdf - 11/29/2018 02:52 PM

Comment: NONE PROVIDED

d. Discharge specific forms.

Please see below for all of the discharge specific forms. A description of the discharge/activity is provided. Click on the link to download the form.

Form B - Discharges of storm water associated with industrial activities. NPDES permit coverage is required for discharges of storm water runoff associated with industrial activity(ies), as categorized in 40 CFR 122.26(b)(14)(i) through 122.26(b)(14)(ix) and 122.26(b)(14)(xi).

[Click on this link to download Form B.](#)

Form C - Discharges of storm water associated with construction activities. NPDES permit coverage is required for activities that disturb one (1) acre or more of total land area. NPDES permit coverage is also required for activities that disturb less than one (1) acre of total land area that are part of a larger common plan of development or sale if the larger common plan will ultimately disturb one (1) acre or more of total land area [40 CFR 122.26(b)(15)]. Land disturbance includes, but is not limited to clearing, grading, grubbing, uprooting of vegetation, demolition (even if leaving foundation slab), staging, stockpiling, excavation into pavement areas which go down to the base course, and storage areas (including areas on the roadway to park equipment if these areas are blocked off from public usage, grassed areas, or bare ground).

[Click on this link to download Form C.](#)

Form D - Discharges of treated effluent from leaking underground storage tank remedial activities. NPDES permit coverage is required for the release or discharge of treated ground water to State waters from the cleanup (or remedial action) of underground storage tanks that have leaked petroleum hydrocarbons.

[Click on this link to download Form D.](#)

Form E - Discharges of once through cooling water less than (1) million gallons per day. NPDES permit coverage is required for discharges to State waters of once through cooling water with a total flow of less than one (1) million gallons per day. "once through cooling water" means water passed through the main cooling condensers one or two times for the purpose of removing waste heat.

[Click on this link to download Form E.](#)

Form F - Discharges of hydrotesting waters. NPDES permit coverage is required for the release or discharge of hydrotesting waters to State waters. "Hydrotesting Waters" means water used to test the integrity of a tank or pipeline, pipeline disinfection, and/or pipeline flushing.

[Click on this link to download Form F.](#)

Form G - Discharges of construction activity dewatering. NPDES permit coverage is required for discharges to State waters of construction activity dewatering effluent. "Dewatering Effluent" is any type of water (e.g. ground water, storm water, stream water, ocean water, etc.) pumped from a construction area.

[Click on this link to download Form G.](#)

Form H - Discharges of treated process wastewater associated with petroleum bulk stations and terminals. NPDES permit coverage is required for discharges to State waters of treated process wastewater effluent from petroleum bulk stations and terminals. Treated process wastewater effluent includes tank water draws, product displacement process wastewater, wash down and fire hydrant system test waters, service station tank draws, recovered groundwater, and contaminated storm water runoff from the product storage and handling areas.

[Click on this link to download Form H.](#)

Form I - Discharges of treated process wastewater associated with well drilling activities. NPDES permit coverage is required for discharges to State waters of treated process wastewater associated with well drilling activities. Treated process wastewater includes well drilling slurries, lubricating fluids wastewaters, and well purge wastewaters.

[Click on this link to download Form I.](#)

Form K - Discharges of storm water and certain non-storm water discharges from small Municipal Separate Storm Sewer Systems (MS4s). NPDES permit coverage is required for storm water and certain non-storm water discharges to State waters from small MS4s.

[Click on this link to download Form K.](#)

Form L - Discharges of circulation water from decorative ponds or tanks. NPDES permit coverage is required for discharges to State waters of circulation water from decorative ponds or tanks containing fish or other aquatic species.

[Click on this link to download Form L.](#)

Form M- Point source discharges from the application of pesticides. NPDES permit coverage is required for the application of pesticides to State waters.

[Click on this link to download Form M.](#)

Form 2A - Pollutant discharges from a publicly owned treatment works to a State water.

[Click on this link to download Form 2A.](#)

Form 2B - Pollutant discharges from a concentrated animal feeding operation or aquatic animal production facility to a State water.

[Click on this link to download Form 2B.](#)

Form 2C - Discharges of wastewater to a State water from an existing facility, other than described in Form 2A and 2B.

[Click on this link to download Form 2C.](#)

Form 2D - Discharges of process wastewater to a State water from a new, proposed facility, other than described in Form 2A and 2B. Process wastewater is water that comes into direct contact with or results from the production or use of raw materials, intermediate product, finished product, byproduct, waste product, or wastewater.

[Click on this link to download Form 2D.](#)

Form 2E - Discharges of nonprocess wastewater which is not regulated by effluent limitation guidelines or new source performance standards. This form is intended primarily for use by dischargers (new or existing) of sanitary wastes and noncontact cooling water. It may not be used for discharges of storm water runoff or by educational, medical, or commercial chemical laboratories, or by publicly owned treatment works.

[Click on this link to download Form 2E.](#)

Form 2S - Sewage sludge (biosolids) for new and existing treatment works treating domestic sewage.

[Click on this link to download Form 2S.](#)

ZID/ZOM Form - Zone of Initial Dilution/Zone of Mixing.

[Click on this link to download the ZOM Form.](#)

Attachments

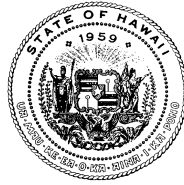
Date	Attachment Name	Context	Confidential?
11/16/2018 3:29 PM	TMK NPDES Spreadsheet-TMT.xlsx	v1 - 5. Tax Map Key (TMK) No.	No
11/29/2018 2:52 PM	NOIFormC-TMT.pdf	v1 - 9. Discharge Specific Attachments	No

Status History

Date	User	Processing Status
11/16/2018 10:38:49 AM	James T Hayes	Draft
11/29/2018 3:01:29 PM	James T Hayes	Submitted

Processing Steps

Step Name	Assigned To/Completed By	Date Completed
Application Submitted	James T Hayes	11/29/2018 3:01:28 PM
Assign To		
In Review		
Pending Applicant Action		
Issue NPDES Permit		



STATE OF HAWAII
DEPARTMENT OF HEALTH
P. O. BOX 3378
HONOLULU, HI 96801-3378

In reply, please refer to:
EMD/CWB

03003PCTM.21

March 3, 2021

Mr. Gary Sanders
Project Manager
TMT International Observatory, LLC
100 West Walnut Street, Suite 300
Pasadena, California 91124

Attention: Mr. Paul Gillett
Facilities Department Head

Dear Mr. Sanders:

**Subject: Rescinding National Pollutant Discharge Elimination System (NPDES)
Revised Draft Permit for TMT International Observatory
Mauna Kea, Island of Hawaii, Hawaii
Permit No. HI S000431**

The Department of Health (DOH), Clean Water Branch (CWB) rescinds and voids the documents identified below:

1. Document No. 02038PCTM.19a, dated March 7, 2019, Notice of Proposed Water Pollution Control Permit for Thirty Meter Telescope International Observatory NPDES Permit No. HI S000431;
2. Draft form of Authorization to Discharge Under the National Pollutant Discharge Elimination System with respect to Permit No. HI S000431 dated March 7, 2019;
3. Document No. 02038PCTM.19c, dated March 7, 2019, Permit Rationale related to NPDES Permit No. HI S000431;
4. Document No. 01011PCTM.20, dated January 9, 2020, relating to DOH's response to public comments.

EXHIBIT "E"

The documents were worded in a way that may imply that the Director of Health has made certain determinations with respect to the permit application related to Docket No. HI S000431. The DOH will issue a new tentative recommendation in accordance with applicable statute and rules.

Please review the enclosed Revised Draft NPDES permit and submit any comments you may have on this document to the CWB within 14 calendar days from the date of this letter.

If you do not have any comments, please choose a date for the public notice in the Hawaii Tribune Herald. You can contact the Hawaii Tribune Herald (contact: Ms. Lisa Kaukani, Tel: (808) 529-4344 or e-mail: lkaukani@staradvertiser.com) to find out when the public notice can be published. Please set the public notice date on a Thursday at least 9 calendar days from the time you inform the CWB of the publication date. Once you provide the CWB with the publication date, the public notice package will be prepared and sent to you.

The publication in the newspaper is for 1 day only. The public comment period is for 30 calendar days. Failure to publish the public notice on the specified date may result in denial of your NPDES Application. If the public notice generates sufficient interest, a public hearing will be held. Comments from the public will be received by the CWB for a period of 30 calendar days. Please be aware that all timely submitted public comments previously received by the DOH in response to the March 7, 2019, Public Notice and May 23, 2019, Notice of Public Hearing will be automatically included in the record for any proposed determination that will be considered prior to any final determination in Docket No. HI S000431.

Please also be aware that you are required to pay for all publication costs in accordance with Hawaii Administrative Rules §11-55-09(d) which states “[a]ll publication and mailing costs associated with the public notification of the director’s tentative determinations with respect to the NPDES permit application shall be paid by the owner or operator to the appropriate publishing agency or agencies determined by the director. The owner or operator shall submit the original signed affidavit of publication to the department within four weeks of the publication date. Failure to provide and pay for public notification, as deemed appropriate by the director, is a basis to delay issuance of an individual permit.”

Mr. Gary Sanders
March 3, 2021
Page 3

03003PCTM.21

For future submittals, include Permit No. HI S000431 and the following certification statement in your cover letter:

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

Should you have any questions, please contact Mr. Colin Maruoka of the Engineering Section, CWB, at (808) 586-4309.

Sincerely,



ALEC WONG, P.E., CHIEF
Clean Water Branch

CTM

Enclosures: 1. Revised Draft NPDES Permit
2. Permit Rationale

c: Water Division (WTR-5), CWA Standards and Permits Office, EPA, Region 9
[via e-mail kozelka.peter@epa.gov only]
Mr. James T. Hayes, Planning Solutions, Inc. [via e-mail jim@psi-hi.com only]
Ms. Jon Makoff, Goodfellow Bros., LLC [via e-mail johnm@goodfellowbros.com only]
Mr. Ian Sandison, Watanabe Ing LLP [via e-mail isandison@wik.com only]
Mr. Paul Gillett, TMT International Observatory, LLC
[via e-mail pgillett@tmt.org only]

DATED

OCTOBER 1, 2016

TMT INTERNATIONAL OBSERVATORY LLC

- and -

TMT OBSERVATORY CORPORATION

ASSET AND EMPLOYEE TRANSFER AGREEMENT



Hogan Lovells US LLP
875 3rd Avenue, New York, NY 10022, USA

EXHIBIT "F"

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CLAUSE

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THIS AGREEMENT is made on

OCTOBER 1, 2016

BETWEEN:

- (1) **TMT International Observatory LLC**, a Delaware limited liability company ("**Buyer**"); and
- (2) **TMT Observatory Corporation**, a California non-profit membership corporation ("**Seller**" and, together with Buyer, the "**Parties**").

WHEREAS:

- (A) Seller owns certain Assets (as defined below) and is a party to certain Plans (as defined below).
- (B) WHEREAS, Buyer wishes to purchase from Seller, and Seller wishes to sell, assign and transfer to Buyer, all right, title and interests of the Seller in and to the Assets.
- (C) WHEREAS, Seller wishes to assign, and Buyer wishes to assume, the Plans.

IT IS AGREED:

1. SALE AND PURCHASE OF ASSETS

1.1 Transfer of Assets.

Subject to the terms and conditions hereof, Seller hereby sells, transfers, assigns and delivers to Buyer, and Buyer purchases from Seller, all right, title and interest of Seller in and to the assets listed on Schedule 1.1 (collectively, the "**Assets**"), free and clear of all liabilities, obligations, liens and encumbrances. Effective as of the Closing Date, Seller, for good and valuable consideration received, irrevocably conveys, transfers, assigns and delivers to Buyer, all of Seller's right, title and interest in, to and under all of the Assets, pursuant to this Agreement, TO HAVE AND TO HOLD such Assets to Buyer, its successors and assigns, for their exclusive use and benefit forever.

1.2 No Other Assumption of Liabilities.

Except to the extent provided in Section 2, the Buyer does not assume any obligation or liability of the Seller, and the Seller will continue to be liable for any and all liabilities of the Seller.

1.3 Closing.

- (a) The closing of the sale and purchase of the Assets and the assignment and assumption of the Plans (the "**Closing**") shall take place on October 1, 2016 or on such other date as the parties may agree to in writing (the "**Closing Date**").

1.4 Consideration.

The consideration for the assignment, transfer and delivery of the Assets by Seller to Buyer and subject to the terms and conditions hereof, shall be:

- (a) the undertaking by the Buyer (which undertaking the Buyer hereby gives) to offer employment to all of the Seller's employees on substantially the same terms as those employees are presently employed by the Seller; and
- (b) the agreement by the Buyer to assume the Plans, as stated in Section 2.3 of this Agreement.

1.5 **Allocation of Value of Consideration for Assets.**

The parties agree to allocate the value of the consideration for purposes, including tax and financial accounting purposes, of the Assets in accordance with Schedule 1.5 (which the parties agree was determined in an arm's length negotiation). The value of the consideration shall be allocated among the Assets in accordance with Section 1060 of the Code. The parties will each report the federal, state and local Tax consequences of the purchase and sale contemplated hereby (including the filing of Internal Revenue Service Form 8594) in a manner consistent with Schedule 1.5, will cooperate with each other in connection with the preparation, execution and filing of all tax returns related to such allocation, and will promptly advise each other regarding the existence of any tax audit, controversy or litigation related to such allocation.

2. **EMPLOYMENT MATTERS**

2.1 **Employment of Seller's Employees.**

- (a) Subject to compliance with applicable Law, beginning on the date hereof Seller shall use its commercially reasonable efforts to provide Buyer access to each Seller Employee and shall cooperate with Buyer to communicate to the Seller Employees the details of the proposed terms and conditions of their employment with Buyer.
- (b) Subject to compliance with applicable Law, including all applicable privacy laws, beginning on the date hereof and upon Buyer's reasonable request, Seller shall provide Buyer information and access to Seller Employees and books and records with respect to the employment terms and conditions of Seller Employees.
- (c) This Agreement is not intended to, and does not, create any rights or obligations to or for the benefit of anyone other than Buyer and Seller.

2.2 **Release and Indemnification.**

Notwithstanding any provision of this Agreement, Seller shall remain responsible, and shall indemnify and hold harmless Buyer, for any and all liabilities, obligations, commitments, costs, damages, losses, claims and expenses (including without limitation, reasonable attorneys' fees and expenses in connection with any action, suit or proceeding brought against Buyer) ("**Losses**") related to or in respect of the claims of any Seller Employee relating to or arising in connection with any and all (i) workers' compensation benefits arising in connection with any occupational injury or disease, or (ii) any other employment-related matters arising in connection with an event or practice, in each case to the extent occurring or existing on or prior to the Closing Date. Buyer shall be responsible, and shall indemnify and hold harmless Seller, for any and all Losses related to or in respect of the claims of any Seller Employee that becomes an employee of Buyer relating to or arising in connection with

any and all (i) workers' compensation benefits arising in connection with any occupational injury or disease, or (ii) any other employment-related matters arising in connection with an event or practice, in each case to the extent occurring or existing after the Closing Date.

2.3 **Assignment and Assumption of Plans.**

Seller maintains that certain TMT Observatory Corporation Voluntary Tax-Deferred Annuity Program and that certain TMT Observatory Corporation Defined Contribution Retirement Plan (each, a "**Plan**", and together, the "**Plans**"). The Plans were each amended and restated on January 1, 2009, and subsequently amended on December 22, 2010. As a material condition of this Agreement, effective as of the Closing Date Buyer assumes and agrees to be bound by all of Seller's obligations under the Plans, and Seller shall have no further obligations with respect to the Plans. Buyer further agrees to perform all obligations as plan sponsor of the Plans and to take any and all actions necessary to implement, maintain, and administer the Plans in accordance with applicable state and federal laws upon assumption of the Plans.

2.4 **Seller's Representations and Warranties Related to the Plans.**

(a) **Validity, etc.**

To Seller's actual knowledge, each of the Plans is valid and binding and is in full force and effect, and Seller is not in material breach under the terms of, and has not provided any notice of any intention to terminate or modify, any such Plan, except (i) as enforceability may be limited by applicable bankruptcy, insolvency, reorganization, moratorium or other similar laws affecting creditors' rights generally and general principles of equity (regardless of whether considered in proceeding at law or in equity) or (ii) where the failure to be legal, valid, binding or enforceable could not, individually or in the aggregate, be or reasonably be expected to be material.

(b) **No Consent Required.**

To Seller's actual knowledge, no consent of any third party is required under any Plan as a result of or in connection with the execution, delivery and performance of this Agreement or the consummation of the transactions contemplated hereby, other than where the failure to obtain such consent could not reasonably be expected to have, individually or in the aggregate, a material effect. Complete copies of (i) each Plan (including all modifications and amendments thereto and waivers thereunder) and (ii) all form contracts, agreements or instruments used in and material to the administration of each Plan have been made available to Buyer.

(c) **Liability; Compliance.**

- (i) Neither of the Plans are (i) a "multiemployer plan" (within the meaning of Section 3(37) of ERISA), (ii) a "multiple employer plan" (within the meaning of Section 413(c) of the Code), or (iii) a single employer plan or other pension plan subject to Title IV or Section 302 of ERISA or Section 412 of the Code.
- (ii) Each Plan meets the requirements of Code Section 403(b).

- (iii) Each Plan has been operated in all material respects in accordance with its terms and in compliance in all material respects with the Code, ERISA, and applicable Law.
- (iv) Except as would not reasonably be expected to become a liability of Buyer or its Affiliates, to Seller's actual knowledge no Seller Benefit Plan exists that, as a result of this Agreement or the transactions contemplated hereby, alone or together with any other event, could reasonably be expected to (i) result in severance pay or any increase in severance pay to any Seller Employee, (ii) accelerate the time of payment or vesting or result in any payment or funding (through a grantor trust or otherwise) of compensation or benefits under, increase the amount payable under, or result in any other material obligation pursuant to, any Seller Benefit Plan in respect of any Seller Employee, (iii) result in the creation or imposition of any Lien on any Asset, or (iv) result in any payment (whether in cash or property or the vesting of property) to any "disqualified individual" (as such term is defined in Treasury Regulation Section 1.280G-1) that could reasonably be construed, individually or in combination with any other such payment, to constitute an "excess parachute payment" (as defined in Section 280G(b)(1) of the Code).

2.5 Buyer's Authority to Sponsor Plans.

Buyer represents and warrants that it has full power and authority to sponsor and maintain the Plans. Buyer represents and warrants that it is an employer described in Code section 501(c)(3) which is exempt from tax under Code section 501(a).

3. REPRESENTATIONS AND WARRANTIES OF SELLER

As of the date hereof and as of the Closing Date, Seller represents and warrants to Buyer as follows:

3.1 Status, Authorization, etc.

Seller is a corporation duly organized, validly existing and in good standing under the laws of California. Seller has the corporate power and authority to execute and deliver this Agreement, to perform fully its obligations hereunder, and to consummate the transactions contemplated hereby. The execution and delivery by Seller of this Agreement, and the consummation of the transactions contemplated hereby, have been duly authorized by all requisite corporate action of Seller. Seller has duly executed and delivered this Agreement. This Agreement is, and on the Closing Date will be, a legal, valid and binding obligation of Seller, enforceable against Seller in accordance with its terms, except (i) as enforceability may be limited by applicable bankruptcy, insolvency, reorganization, moratorium or other similar laws affecting creditors' rights generally and general principles of equity (regardless of whether considered in proceeding at law or in equity) or (ii) where the failure to be legal, valid, binding or enforceable could not, individually or in the aggregate, be or reasonably be expected to be material.

3.2 **No Conflicts, etc.**

- (a) The execution, delivery and performance by Seller of this Agreement, and the consummation of the transactions contemplated hereby, do not and will not (i) materially conflict with, contravene, result in a material violation or breach of (with or without the giving of notice or the lapse of time or both), give rise to a right or claim of termination, modification or vesting, or result in the creation of any Lien upon any of the Assets under any applicable Law, or (ii) conflict with, contravene, result in a violation or breach of (with or without the giving of notice or the lapse of time or both), give rise to a right or claim of termination, modification or vesting, or result in the creation of any Lien upon any of the Assets under the Organizational Documents of Seller.
- (b) No Governmental Approval or other Consent is required to be obtained or made by Seller or any of its Affiliates in connection with the execution and delivery of this Agreement or the consummation or performance of the transactions contemplated hereby, the failure of which to obtain or make could reasonably be expected to have, individually or in the aggregate, a material effect on the Assets or each of the Plans.

3.3 **Title to Assets.**

Seller has good and valid title to all of the Assets. Seller's title to the Assets is free and clear of any and all Liens save for such Liens as will be discharged on or before Closing. SELLER SELLS, ASSIGNS, TRANSFERS AND CONVEYS THE ASSETS TO BUYER "AS IS" AND "WHERE IS", WITH NO REPRESENTATIONS OR WARRANTIES AS TO MERCHANTABILITY, FITNESS OR USE.

3.4 **Employees, Labor Matters, etc.**

- (a) There are no collective bargaining agreements to which Seller is a party or by which Seller is bound with respect to any Seller Employees and there are no labor unions or other organizations or groups representing or purporting to represent or attempting to represent any Seller Employees.
- (b) (i) To the actual knowledge of Seller, there are no formal organizational campaigns, petitions or other material unionization activities seeking recognition of a bargaining unit related to the operations of the Seller, (ii) there are no strikes or work stoppages pending or, to the knowledge of Seller, threatened with respect to Seller Employees and (iii) no such strike or work stoppage has occurred within the three (3) years preceding the date of this Agreement. Seller is in compliance, in all material respects, with respect to Seller Employees, in all material respects with all applicable Laws respecting labor, employment, fair employment practices, terms and conditions of employment, workers' compensation, occupational safety and health requirements, employee and independent contractor classification, immigration matters, the WARN Act, the FLSA, employment discrimination, equal opportunity, employee leave issues and unemployment insurance and related matters.
- (c) No current or, to the actual knowledge of Seller, former Seller Employees are covered by non-competition agreements in place with respect to the Seller.

3.5 EXCLUSIVITY OF REPRESENTATIONS.

The representations and warranties of Seller set forth in Section 2 and this Section 3 are the only representations and warranties made by Seller with respect to the Assets or the Plans. EXCEPT FOR THE REPRESENTATIONS AND WARRANTIES SPECIFICALLY SET FORTH IN SECTION 2 AND THIS SECTION 3, OR ANY CERTIFICATE DELIVERED UNDER THIS AGREEMENT, SELLER SPECIFICALLY DISCLAIMS AND MAKES NO REPRESENTATION, WARRANTY OR GUARANTY, EXPRESS OR IMPLIED, AS TO ANY MATTER WHATSOEVER.

4. REPRESENTATIONS AND WARRANTIES OF BUYER

As of the date hereof and as of the Closing Date, Buyer represents and warrants to Seller as follows:

4.1 Corporate Status; Authorization, etc.

Buyer is a limited liability company, duly organized, validly existing and in good standing, under the laws of the jurisdiction of its organization with full corporate power and authority to execute and deliver this Agreement, to perform fully its obligations hereunder and to consummate the transactions contemplated hereby. The execution and delivery by Buyer of this Agreement, and the consummation of the transactions contemplated hereby, have been duly authorized by all requisite corporate action of Buyer. Buyer has duly executed and delivered this Agreement. This Agreement is a valid and legally binding obligation of Buyer, enforceable against Buyer in accordance with its terms, except (i) as enforceability may be limited by applicable bankruptcy, insolvency, reorganization, moratorium or other similar laws affecting creditors' rights generally and general principles of equity (regardless of whether considered in proceeding at law or in equity) or (ii) where the failure to be legal, valid, binding or enforceable could not, individually or in the aggregate, be or reasonably be expected to be material.

4.2 No Conflicts, etc.

The execution, delivery and performance by Buyer of this Agreement, and the consummation of the transactions contemplated hereby, do not and will not conflict with or result in a violation of or under (with or without the giving of notice or the lapse of time, or both) (i) the Organizational Documents of Buyer, (ii) any Law applicable to Buyer or any of its Affiliates or any of their properties or assets or (iii) any contract, agreement or other instrument applicable to Buyer or any of its Affiliates or any of their properties or assets, except, in the case of clause (iii), for violations and defaults that, individually and in the aggregate, have not and will not materially impair the ability of Buyer to perform its obligations under this Agreement. No Governmental Approval or other Consent is required to be obtained or made by Buyer in connection with the execution and delivery of this Agreement or the consummation of the transactions contemplated thereby.

4.3 EXCLUSIVITY OF REPRESENTATIONS.

The representations and warranties of Buyer set forth in Section 2 and this Section 4 are the only representations and warranties made by Buyer. EXCEPT FOR THE REPRESENTATIONS AND WARRANTIES SPECIFICALLY SET FORTH IN SECTION 2

AND THIS SECTION 4 OR ANY CERTIFICATE DELIVERED UNDER THIS AGREEMENT, BUYER SPECIFICALLY DISCLAIMS AND MAKES NO REPRESENTATION, WARRANTY, GUARANTY, EXPRESS OR IMPLIED, AS TO ANY MATTER WHATSOEVER.

5. COVENANTS

5.1 Covenants of Seller.

(a) Closing Date.

From the date hereof until the Closing Date, Seller shall not:

- (i) Take any actions, or expressly permit any actions to be taken, which may result in a material impairment of the value of the Assets including, without limitation, the creation of any Liens which may affect the Assets.
- (ii) Take any actions, or expressly permit any actions to be taken, with respect to the Plans which would materially increase the Seller's obligations or materially decrease the Seller's rights, or materially increase the obligations of Buyer or materially decrease the rights of Buyer after assumption of such Plans, related to the Plans.

(b) Further Assurances.

Following the Closing, Seller shall from time to time execute and deliver such additional instruments, documents, conveyances or assurances and take such other actions as shall be necessary, or otherwise reasonably requested by Buyer, to confirm and assure the rights and obligations provided for in this Agreement and render effective the consummation of the transactions contemplated hereby.

5.2 Covenants of Buyer.

(a) Further Actions.

- (i) Buyer shall use its commercially reasonable efforts to take all actions and to do all things necessary, proper or advisable to consummate the transactions contemplated hereby by the Closing Date.
- (ii) Buyer shall, as promptly as practicable, file or supply, or cause to be filed or supplied, all applications, notifications and information required to be filed or supplied by Buyer pursuant to applicable Law in connection with this Agreement and the consummation of the transactions contemplated hereby.

(b) Further Assurances.

Following the Closing, Buyer shall, and shall cause its Affiliates, from time to time, to execute and deliver such additional instruments, documents, conveyances or assurances and take such other actions as shall be necessary, or otherwise reasonably requested by Seller, to confirm and assure the rights and obligations provided for in this Agreement and render effective the consummation of the transactions contemplated hereby.

(c) **Taxes.**

Buyer agrees to promptly pay all sales, transfer, use or other taxes, duties, claims or charges imposed on and/or related to the sale of the Assets to Buyer under this Agreement by any tax authority or other governmental agency and to defend, indemnify and hold Seller harmless from and against any such taxes, duties, claims, or charges for payment thereof by any tax authority or other governmental agency.

(d) **Waiver of Any Bulk Sales Obligations.**

Buyer hereby waives compliance by Seller with any applicable bulk sales requirements imposed by Law in connection with the transaction contemplated by this Agreement.

6. **CONDITIONS PRECEDENT**

6.1 **Conditions to Obligations of Each Party.**

The obligations of the parties to consummate the transactions contemplated hereby shall be subject to the fulfillment on or prior to the Closing Date of the following conditions:

(a) **No Injunction, etc.**

Consummation of the transactions contemplated hereby shall not have been restrained, enjoined or otherwise prohibited by any applicable Law, including any order, injunction, decree or judgment of any court or other Governmental Authority, and no proceeding challenging such transactions shall have been initiated. No court or other Governmental Authority shall have determined any applicable Law to make illegal the consummation of the transactions contemplated hereby, and no proceeding with respect to the application of any such applicable Law to such effect shall be pending.

(b) **Section 5913 of the California Corporations Code**

Twenty days shall have elapsed after Seller has given notice to the Attorney General of California under Section 5913 of the California Corporations Code and the Attorney General shall have taken no action to prevent the Closing or to impose any material conditions in relation to the Closing or the Attorney General has given the corporation a written waiver of Section 5913 as to the Closing.

6.2 **Conditions to Obligations of Buyer.**

The obligations of Buyer to consummate the transactions contemplated hereby shall be subject to the fulfillment (or waiver by Buyer) on or prior to the Closing Date of the following additional conditions:

(a) **Representations, Performance, etc.**

The representations and warranties of Seller contained in this Agreement shall be true and correct in all respects (in the case of any representation or warranty containing any materiality qualification) or in all material respects (in the case of any

representation or warranty without any materiality qualification), at and as of the date hereof and on and as of the Closing Date with the same effect as though made on and as of such date, except, in each case, where the failure of such representation or warranty to be true and correct, could not, individually or in the aggregate, reasonably be expected to be deemed material to the Assets or the Plans. Seller shall have duly performed and complied in all material respects with all agreements and conditions required by this Agreement to be performed or complied with by it prior to or on the Closing Date.

(b) Related Agreements

Each of (i) the Amended and Restated Contribution Agreement between Buyer and California Institute of Technology, (ii) the Amended and Restated Contribution Agreement between Buyer and The Regents of the University of California, and (iii) the Task Framework Agreement by and among Buyer, California Institute of Technology, and The Regents of the University of California shall have been executed by and delivered to each of the respective parties thereto and shall be effective as of the Closing Date.

(c) Seller Employees.

Each of the Seller Employees to which Buyer has made an offer of employment shall have accepted such offer.

(d) Transfer Documents.

Seller shall have executed and delivered to Buyer at or before the Closing all documents, certificates and agreements necessary to transfer to Buyer good and valid title to the Assets, free and clear of any and all Liens thereon.

6.3 Conditions to Obligations of Seller.

The obligation of Seller to consummate the transactions contemplated hereby shall be subject to the fulfillment (or waiver by Seller), on or prior to the Closing Date, of the following additional conditions:

(a) Representations, Performance, etc.

The representations and warranties of Buyer contained in this Agreement shall be true and correct in all respects (in the case of any representation or warranty containing any materiality qualification) or in all material respects (in the case of any representation or warranty without any materiality qualification), at and as of the date hereof and on and as of the Closing Date with the same effect as though made at and as of such date, except, in each case, where the failure of such representation or warranty to be true and correct, could not, individually or in the aggregate, reasonably be expected to prevent or materially delay the performance by Buyer of its obligations hereunder or the consummation by Buyer of the transactions contemplated hereby. Buyer shall have duly performed and complied in all material respects with all agreements and conditions required by this Agreement to be performed or complied with by it prior to or on the Closing Date. Buyer shall have delivered to Seller a

certificate, dated as of the Closing Date and signed by its duly authorized officer, to the foregoing effect.

7. TERMINATION

7.1 Termination.

This Agreement may be terminated at any time prior to the Closing Date:

- (a) by the written agreement of Buyer and Seller;
- (b) by Buyer if there has been a material breach on the part of Seller of any representation, warranty, covenant or agreement of Seller set forth herein, which breach, if not a willful breach, has not been cured within forty-five (45) days; or
- (c) by Seller if there has been a material breach on the part of Buyer of any representation, warranty, covenant or agreement of Buyer set forth herein, which breach, if not a willful breach, has not been cured within forty-five (45) days.

7.2 Effect of Termination.

In the event of the termination of this Agreement pursuant to the provisions of Section 7.1, this Agreement shall become void and have no effect, without any liability to any Person in respect hereof or of the transactions contemplated hereby on the part of any party hereto, except as specified in Section 9.1 and except for any liability resulting from such party's breach of this Agreement.

8. DEFINITIONS

8.1 Definition of Certain Terms.

The terms defined in this Section 8.1, whenever used in this Agreement, shall have the respective meanings indicated below for all purposes of this Agreement.

"Affiliate" of a Person means a Person that directly or indirectly through one or more intermediaries, controls, is controlled by, or is under common control with, the first Person. **"Control"** (including the terms "controlled by" and "under common control with") means the possession, directly or indirectly, of the power to direct or cause the direction of the management policies of a person, whether through the ownership of voting securities, by contract or credit arrangement, as trustee or executor, or otherwise.

"Agreement" means this Asset Purchase Agreement, including the Schedules hereto.

"Article" has the meaning given to such term in Section 8.2.

"Assets" has the meaning given to such term in Section 1.1.

"Business Day" means a day other than a Saturday, Sunday or other day on which commercial banks in New York City are authorized or required to close.

"Buyer" has the meaning given to such term in the preamble of this Agreement.

“Closing” has the meaning given to such term in Section 1.3.

“Closing Date” has the meaning given to such term in Section 1.3.

“Code” means the Internal Revenue Code of 1986, as amended.

“Consent” means any consent, approval, authorization, waiver, permit, grant, franchise, concession, agreement, license, exemption or order of, registration, certificate, declaration or filing with, or report or notice to, any Person, including any Governmental Authority.

“\$” or **“dollars”** means lawful money of the United States of America.

“Employee Benefit Plan” means each written or oral employee benefit plan, scheme, program, policy, arrangement and contract (including, but not limited to, any “employee benefit plan,” as defined in Section 3(3) of ERISA, whether or not subject to ERISA, and any retirement, welfare benefit, fringe benefit, stock option or other equity-based compensation, bonus, sales or other incentive, supplemental retirement, deferred compensation, retiree health, life insurance, cafeteria, vacation, and any employment, consulting, non-competition, non-solicitation, tax gross-up, collective bargaining, termination, retention, change in control or severance plan, program, policy, arrangement or contract) that is maintained or contributed to by Seller or any of its Affiliates or any Person that is an ERISA Affiliate for the benefit of its or their current or former employees.

“ERISA” means the Employee Retirement Income Security Act of 1974, as amended.

“ERISA Affiliate” means, with respect to any Person, any trade or business, whether or not incorporated, which together with such Person, is treated as a single employer under Section 414 of the Code.

“Exhibit” has the meaning given to such term in Section 8.2.

“FLSA” means the Fair Labor Standards Act, as amended.

“Governmental Approval” means any Consent of, with or to any Governmental Authority.

“Governmental Authority” means any nation or government, any state or other political subdivision thereof, any entity, authority or body exercising executive, legislative, judicial, regulatory or administrative functions of or pertaining to government, including any governmental authority, agency, department, board, commission or instrumentality of the United States or a foreign nation or jurisdiction, any State of the United States or any political subdivision of any thereof, any court, tribunal or arbitrator, and any self-regulatory organization.

“Law” means any law, statute, ordinance, rule, regulation (including those promulgated by self-regulatory organizations with jurisdiction over a party), judgment, injunction, order or decree applicable to the Seller, the Assets or the Plans.

“Lien” means any mortgage, pledge, hypothecation, right of others, claim, security interest, encumbrance, lease, sublease, license, occupancy agreement, adverse claim or interest, easement, covenant, encroachment, burden, title defect, title retention agreement, voting trust agreement, interest, equity, option, lien, right of first refusal, charge or other restrictions

or limitations of any nature whatsoever, including but not limited to such as may arise under any contract.

"Losses" has the meaning given to such term in Section 2.2.

"Organizational Documents" means the certificate of incorporation and by-laws, certificate of formation and limited liability company agreement, partnership agreement or other organizational documents of an entity, and any side letters entered into in connection with any of the foregoing.

"Parties" has the meaning given to such term in the preamble of this Agreement.

"Person" means any natural person, firm, partnership, association, corporation, company, trust, business trust, Governmental Authority or other entity.

"Plan" or **"Plans"** have the meaning given to such terms in Section 2.1.

"Schedule" has the meaning given to such term in Section 8.2.

"Section" has the meaning given to such term in Section 8.2.

"Seller" has the meaning given to such term in the preamble of this Agreement.

"Seller Benefit Plans" means each Employee Benefit Plan that provides benefits or compensation in respect of any current or former Seller Employee (including, for avoidance of doubt, those Employee Benefit Plans that provide benefits or compensation in respect of the Seller Employees and employees of Seller and its Affiliates who are not Seller Employees).

"Seller Employee" means each employee of Seller including such individuals who are not actively at work due to an authorized leave of absence for vacation, holiday, illness, jury duty, bereavement leave, military leave, short-term or long-term disability leave, workers' compensation or other authorized leave of absence.

"WARN Act" means the Worker Adjustment and Retraining Notification Act, as amended.

8.2 **Construction.**

Unless the context otherwise requires, as used in this Agreement: (i) "or" is not exclusive; (ii) "including" and its variants mean "including, without limitation" and its variants; (iii) words defined in the singular have the parallel meaning in the plural and vice versa; (iv) words of one gender shall be construed to apply to each gender; (v) the terms "hereof", "herein", "hereby", "hereto", and derivative or similar words, refer to this entire Agreement, including the Schedules hereto; (vi) the terms "Article", "Section", "Exhibit" and "Schedule" refer to the specified Article, Section, Exhibit or Schedule of or to this Agreement; (vii) any grammatical form or variant of a term defined in this Agreement shall be construed to have a meaning corresponding to the definition of the term set forth herein; (viii) a reference to any Person includes such Person's successors and permitted assigns; and (ix) any reference to "days" means calendar days unless Business Days are expressly specified. If any action under this Agreement is required to be done or taken on a day that is not a Business Day, then such

action shall not be required to be done or taken on such day but on the first succeeding Business Day thereafter.

9. **MISCELLANEOUS**

9.1 **Expenses.**

Except as otherwise specifically provided in this Agreement, Seller, on the one hand, and Buyer, on the other hand, shall bear their respective expenses, costs and fees (including attorneys' and auditors' fees) in connection with the transactions contemplated hereby, including the preparation, execution and delivery of this Agreement and compliance herewith, whether or not the transactions contemplated hereby shall be consummated.

9.2 **Severability.**

If any provision of this Agreement, including any phrase, sentence, clause, Section or subsection, is inoperative or unenforceable for any reason, such circumstances shall not have the effect of rendering the provision in question inoperative or unenforceable in any other case or circumstance, or of rendering any other provision or provisions herein contained invalid, inoperative or unenforceable to any extent whatsoever.

9.3 **Notices.**

All notices, requests, demands, waivers and other communications required or permitted to be given under this Agreement shall be in writing and shall be deemed to have been duly given if (a) delivered personally, (b) mailed by first-class, registered or certified mail, return receipt requested, postage prepaid, (c) sent by next-day or overnight mail or delivery or (d) via e-mail to each e-mail address listed below for each party, and shall be given:

(a) if to Buyer, to

TMT International Observatory, LLC
100 West Walnut Street
Suite 300
Pasadena, CA 91124
Attn: Gary Sanders, Project Director
Email: sanders@tmt.org
with a copy to:

Hogan Lovells US LLP
875 Third Avenue
New York, New York 10022
Attn: Mike Matheou
Email: mike.matheou@hoganlovells.com

(b) if to Seller, to

TMT Observatory Corporation
100 West Walnut Street
Suite 300

Pasadena, CA 91124
Attn: David Goodman
Email: rgoodman@tmt.org

or, in each case, at such other address as may be specified in writing to the other parties hereto.

All such notices, requests, demands, waivers and other communications shall be deemed to have been received (w) if by personal delivery, on the day after such delivery, (x) if by certified or registered mail, on the third Business Day after the mailing thereof, or (y) if by next-day or overnight mail or delivery, on the day delivered.

9.4 **Miscellaneous.**

(a) **Headings.**

The headings contained in this Agreement are for purposes of convenience only and shall not affect the meaning or interpretation of this Agreement.

(b) **Entire Agreement.**

This Agreement (including the Schedules hereto) constitutes the entire agreement and supersedes all prior agreements and understandings, both written and oral, between the parties with respect to the subject matter hereof.

(c) **Counterparts.**

This Agreement may be executed in several counterparts, each of which shall be deemed an original and all of which shall together constitute one and the same instrument.

(d) **Arbitration.**

Any dispute, claim or controversy between Buyer and Seller arising out of or relating to this Agreement or the breach, termination, enforcement, interpretation or validity thereof, including the determination of the scope or applicability of this agreement to arbitrate, shall be determined exclusively by arbitration in Los Angeles, California before one arbitrator. The arbitration shall be administered by JAMS pursuant to its Comprehensive Arbitration Rules. Judgment on an arbitration award may be entered in any court having jurisdiction. This clause shall not preclude parties from seeking provisional remedies in aid of arbitration from a court of appropriate jurisdiction.

(e) **Governing Law and Jurisdiction.**

This Agreement shall be governed by and construed and enforced in accordance with the laws of the State of California, without reference or regard to conflict of law or choice of law rules or principles. The Parties acknowledge that this Agreement evidences a transaction involving interstate commerce. Notwithstanding the first provision in this Section 9.4(e) with respect to applicable substantive law, any arbitration conducted pursuant to the terms of this Agreement shall be governed by the Federal Arbitration Act (9 U.S.C., Secs. 1-16). Any action or proceeding by either

of the parties to enforce this Agreement, compel arbitration, enforce any arbitration award or for specific performance or other equitable relief shall be brought only in a state or federal court located in Los Angeles County, California. The parties hereby irrevocably submit to the exclusive jurisdiction of such courts and waive the defense of inconvenient forum to the maintenance of any such action or proceeding in such venue.

(f) **Binding Effect.**

This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors and permitted assigns.

(g) **Assignment.**

This Agreement shall not be assignable or otherwise transferable by either party hereto without the prior written consent of the other party hereto.

(h) **No Third Party Beneficiaries.**

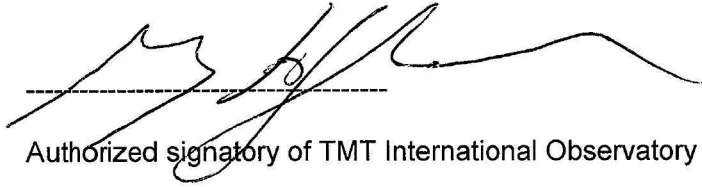
Nothing in this Agreement shall confer any rights upon any Person other than the parties hereto and their respective successors and permitted assigns.

(i) **Amendment; Waivers, etc.**

No amendment, modification or discharge of this Agreement, and no waiver hereunder, shall be valid or binding unless set forth in writing and duly executed by the party against whom enforcement of the amendment, modification, discharge or waiver is sought. Any such waiver shall constitute a waiver only with respect to the specific matter described in such writing and shall in no way impair the rights of the party granting such waiver in any other respect or at any other time. Neither the waiver by any of the parties hereto of a breach of or a default under any of the provisions of this Agreement, nor the failure by any of the parties, on one or more occasions, to enforce any of the provisions of this Agreement or to exercise any right or privilege hereunder, shall be construed as a waiver of any other breach or default of a similar nature, or as a waiver of any of such provisions, rights or privileges hereunder. The rights and remedies herein provided are cumulative and are not exclusive of any rights or remedies that any party may otherwise have at law or in equity.

Signed by:

TMT International Observatory LLC




Authorized signatory of TMT International Observatory LLC

Gray Sanders

Name of Authorized Signatory
of TMT International Observatory LLC (printed)

TMT Observatory Corporation



Digitally signed by David
Goodman
DN: cn=David Goodman, o=TMT
Observatory Corporation, ou,
email=goodman@tmt.org, c=US
Date: 2016.08.30 12:44:40 -0700

Authorized Signatory
of TMT Observatory Corporation

David Goodman

Name of Authorized Signatory
of TMT Observatory Corporation (printed)

SCHEDULE 1.1

ASSETS

Asset Description
GigapixelCam
Global Safety Controller and Remote I/O unit 1
Local Safety Controller
2010 4 Runner
CCD SIM
PTC Software/ESD only - Creo Essentials
RESONANT, HIGH-Q ELECTRO-OPTIC PHASE MODULATOR MA. TUNABLE FREQ: MIN. 1.6-1.8 GHZ
DELL PRECISION T7600
RTC TESTBED
RSLogix 5000 Professional Edition Software
Workstation W4920XT-1-CL2
Workstation W4920XT-1-CL2
LABVIEW REALTIME COMPACTRIO DEVELOPMENT SYSTEM
CCD SIM
TMT Board Rm A/V Eq: 4(65")/HDX9004/Eagle Eye Camera/2(R-3650 Skrs)/8(CT550 Spkrs)
TMT North Conf Rm A/V Eq: 4(65")/HDX9004/Eagle Eye Camera/2(R-3650 Skrs)/ 8 (CT550 Spkrs)
TMT South Conf Rm A/V Eq: 4(65")/VSX8000/2(R-3650 Skrs)/ 8 (CT550 Spkrs)
Meeting Room 1 Audio Visual Unit
Copying Machine
BRIDGE, VIDEO CONFERENCING
Copying Machine
Project Mgr's Office (G. Sanders A/V Equipment)
TMT FOYER A/V EQPMT: 2(55")
CSI (A/V)
Meeting area 4 aw eqmpt
TMT North Conf Rm A/V Eq: 4(65")/HDX9004/Eagle Eye Camera/2(R-3650 Skrs)/ 8 (CT550 Spkrs)
TMT South Conf Rm A/V Eq: 4(65")/VSX8000/2(R-3650 Skrs)/ 8 (CT550 Spkrs)
System, Digital Image Motion Monitor (DIMM)
Analyzer, Four Channel Signal
SYSTEM, SPECTROPHOTOMETER W/ COMPUTER AND SOFTWARE
DISTANCE MEASURING INTERFEROMETER SYSTEM
TMT MIRROR FABRICATION VERTICAL SLIDE MECHANISM
Mobile Video Teleconferencing Unit
SITE TESTING DATA ARCHIVE SERVER
Site Testing Data Archive Server

Dell Precision 690
PLOTTER PRINTER
Digital Imaging Systems
Computer
Shack Hartmann Microlens Array
Shack Hartmann Microlens Array
Shack Hartmann Microlens Array
Shack Hartmann Microlens Array
Exposure 8' x 10' Backwall Display - Job Number 271-29

SCHEDULE 1.5

ALLOCATION

Asset Description	Value of Consideration
GigapixelCam	\$11,725.83
Global Safety Controller and Remote I/O unit 1	\$10,698.25
Local Safety Controller	\$8,279.42
2010 4 Runner	\$7,675.73
CCD SIM	\$7,128.60
PTC Software/ESD only - Creo Essentials	\$5,489.76
RESONANT, HIGH-Q ELECTRO-OPTIC PHASE MODULATOR MA. TUNABLE FREQ: MIN. 1.6-1.8 GHZ	\$3,348.05
DELL PRECISION T7600	\$2,877.57
RTC TESTBED	\$1,690.75
RSLogix 5000 Professional Edition Software	\$1,514.01
Workstation W4920XT-1-CL2	\$1,421.45
Workstation W4920XT-1-CL2	\$1,299.69
LABVIEW REALTIME COMPACTRIO DEVELOPMENT SYSTEM	\$1,168.73
CCD SIM	\$762.20
TMT Board Rm A/V Eq: 4(65")/HDX9004/Eagle Eye Camera/2(R-3650 Skrs)/8(CT550 Spkrs)	\$11,700.81
TMT North Conf Rm A/V Eq: 4(65")/HDX9004/Eagle Eye Camera/2(R-3650 Skrs)/ 8 (CT550 Spkrs)	\$7,082.99
TMT South Conf Rm A/V Eq: 4(65")/VSX8000/2(R-3650 Skrs)/ 8 (CT550 Spkrs)	\$7,082.99
Meeting Room 1 Audio Visual Unit	\$5,007.81
Copying Machine	\$1,734.84
BRIDGE, VIDEO CONFERENCING	\$2,696.59
Copying Machine	\$1,255.84
Project Mgr's Office (G. Sanders A/V Equipment)	\$869.77
TMT FOYER A/V EQPMT: 2(55")	\$734.92
CSI (A/V)	\$656.55
Meeting area 4 aw eqmpt	\$627.89
TMT North Conf Rm A/V Eq: 4(65")/HDX9004/Eagle Eye Camera/2(R-3650 Skrs)/ 8 (CT550 Spkrs)	\$1,495.91
TMT South Conf Rm A/V Eq: 4(65")/VSX8000/2(R-3650 Skrs)/ 8 (CT550 Spkrs)	\$1,495.91
System, Digital Image Motion Monitor (DIMM)	\$16,540.56
Analyzer, Four Channel Signal	\$890.46
SYSTEM, SPECTROPHOTOMETER W/ COMPUTER AND SOFTWARE	\$7,153.24
DISTANCE MEASURING INTERFEROMETER SYSTEM	\$3,862.06
TMT MIRROR FABRICATION VERTICAL SLIDE MECHANISM	\$2,084.03

Mobile Video Teleconferencing Unit	\$851.77
SITE TESTING DATA ARCHIVE SERVER	\$1,903.57
Site Testing Data Archive Server	\$640.58
Dell Precision 690	\$567.19
PLOTTER PRINTER	\$662.02
Digital Imaging Systems	\$1,339.85
Computer	\$2,487.06
Shack Hartmann Microlens Array	\$1,126.83
Shack Hartmann Microlens Array	\$1,126.83
Shack Hartmann Microlens Array	\$1,126.83
Shack Hartmann Microlens Array	\$1,126.83
Exposure 8' x 10' Backwall Display - Job Number 271-29	\$842.27
TOTAL	\$151,854.83

BILL OF SALE AND ASSIGNMENT AGREEMENT

This Bill of Sale and Assignment (this “Assignment”), dated as of September 30, 2020, is entered into by TMT Observatory Corporation, a California nonprofit public benefit corporation (“Assignor”) and TMT International Observatory LLC, a Delaware limited liability company (“Assignee” and, collectively, the “Parties”).

WHEREAS, Assignor was formed in 2003 by the California Institute of Technology (“Caltech”) and the University of California (“UC”) for the purpose of fostering astronomy through the building and operation of a thirty-meter telescope (the “TMT Project”);

WHEREAS, Assignee was formed in May 2014 and is comprised of Caltech, UC, the National Institutes of Natural Sciences of Japan, the National Astronomical Observatories of the Chinese Academy of Sciences, the Department of Science and Technology of India, and the National Research Council of Canada;

WHEREAS, Assignee was formed, among other reasons, so that the voting power and telescope observing time could vary amongst its members proportionate to their respective contributions to the TMT Project;

WHEREAS, Assignee is the current owner of the TMT Project and is organized and operated to provide for the observation and collection of images and information from deep space to advance human knowledge of astronomy and the origins of the universe by and through the execution of the TMT Project, and the means and methods of advancing this purpose is for Assignee’s members to, among other things, develop, design, finance, construct, commission, operate and decommission a next generation segmented mirror telescope and associated observatory;

WHEREAS, on or around June 12, 2014, the Hawaii Department of Health issued a National Pollutant Discharge Elimination System Permit No. HI S000431 (the “NPDES Permit”) to Assignor;

WHEREAS, Assignor and Assignee previously entered into that Asset and Employee Transfer Agreement (the “Asset Purchase Agreement”), effective on or about October 1, 2016 (the “Effective Date”), pursuant to which Assignor transferred to Assignee substantially all of its assets and Assignee assumed substantially all of Assignor’s liabilities in connection therewith, in each case in accordance with the terms of the Asset Purchase Agreement, and since that date Assignor has continued the business and operations related to the assets assigned by Assignee;

WHEREAS, the understanding of the Parties is that Assignee is serving as the successor-in-interest to the NPDES Permit that issued to Assignor, and Assignee has been acting in such capacity as pertains to the NPDES Permit since 2016;

WHEREAS, the Parties have determined that the NPDES Permit was mistakenly omitted from Schedule 1.1 of the Asset Purchase Agreement, which sets forth the assets to be transferred thereunder by Assignor, even though it was intended that substantially all of the operating assets related to the TMT Project be transferred to Assignee; and

EXHIBIT "G"

WHEREAS, in accordance with the terms of the Asset Purchase Agreement and pursuant to the “further assurances” clause in Section 5.1(b) thereof, Assignor desires to confirm transfer and assignment of the NPDES Permit to Assignee effective as of the Effective Date.

NOW, THEREFORE, Assignor, in consideration of the premises, covenants and agreements contained herein and in the Asset Purchase Agreement, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, hereby agrees as follows:

1. Sale and Assignment of NPDES Permit. Assignor hereby, as of the Effective Date, irrevocably assigns, transfers, conveys and delivers to Assignee the NPDES Permit and all of Assignor’s rights, title and interest in the NPDES Permit. Notwithstanding anything to the contrary in the Asset Purchase Agreement, the Parties acknowledge and agree that Assignor assigns, transfers, conveys and delivers the NPDES Permit to Assignee (i) “as is” and “where is” with no representations or warranties as to merchantability, fitness or use and (ii) without any representation, warranty, guaranty, express or implied, as to any matter whatsoever. As consideration for assignment of the NPDES Permit, Assignee accepts all responsibility, coverage, and liability associated with the NPDES Permit effective as of the Effective Date and agrees to indemnify and hold Assignor harmless in connection with any matters arising from the same.

2. Further Assurances. At the sole cost and expense of Assignee, each of the Parties shall take all further actions necessary to effectuate the transactions contemplated hereby and to evidence the assignment and transfer of the NPDES Permit to Assignee, including to execute such further assignments or other documents as may be reasonably requested for the purpose of giving effect to, or evidencing or giving notice of, the transfer contemplated by this Assignment.

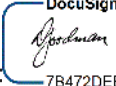
3. Governing Law. This Assignment shall be governed by, and interpreted in accordance with, the laws of the State of California, without reference or regard to conflict of law or choice of law rules or principles.

[Signature Page Follows]

IN WITNESS WHEREOF, each of Assignor and Assignee has caused this Bill of Sale and Assignment to be duly executed effective as of the Effective Date.

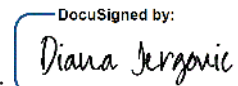
ASSIGNOR:

TMT OBSERVATORY CORPORATION

DocuSigned by:

By: 7B472DEB64584A8...
Name: David Goodman
Title: Chief Operating Officer and Treasurer

ASSIGNEE:

TMT INTERNATIONAL OBSERVATORY LLC

DocuSigned by:

By: 20CB6D3F10D448E...
Name: Diana Jergovic
Title: Board Secretary

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Activists pledge more protests as Thirty Meter Telescope construction given green light to proceed



By HNN Staff
Published: Jun. 21, 2019 at 7:55 AM HST



HONOLULU, Hawaii (HawaiiNewsNow) - Activists say hundreds are planning to protest Mauna Kea construction when it begins, and they say they’re ready to be arrested if that’s what it takes.

EXHIBIT "H"



Officers arrested Kahookahi Kanuha on Thursday morning atop Mauna Kea in an apparent sign that construction of the TMT project is ramping up. (Image: Jennifer Ruggles)

“I just don’t think anyone is going to budge and they are probably going to have to to use force,” said Healani Sonoda-Pale, of Ka Lahui Hawaii Political Action Committee.

The statements came after multiple law enforcement agencies headed up to Mauna Kea early Thursday morning to dismantle structures and shrines built by Native Hawaiian activists, clearing the way for construction crews. One protester was arrested on the mountain.

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The state operation happened a day after the state issued the Thirty Meter Telescope project a “notice to proceed” with construction, a decade after the \$2 billion telescope was first announced.

In a news conference, Gov. David Ige said construction of the project is set to begin “sometime this summer,” but no actual kick-off date has been released.

[Read more: [Construction of Thirty Meter Telescope expected to take 10 years to complete](#)]

Ige said that’s because the start date is still being hammered out. “We will proceed in a way that respects the people and place and culture that make Hawaii unique," he said.

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Meanwhile, Big Island Mayor Harry Kim pledged to use county resources to keep protests peaceful.

"I would assume no different than any other time," he said. "This will be to keep the area safe of trespassers or demonstrators in their designated area and I understand that anywhere along Saddle Road is county jurisdiction."



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State Department of Land and Natural Resources officers arrived on Mauna Kea around 3 a.m. Thursday and split into groups, dismantling the structures. The road to the summit was also blocked.


Activist Kahookahi Kanuha was arrested during the operation and released Thursday afternoon.

He told Hawaii News Now that officers took him into custody because "I simply wanted to be able to record and document what they were gonna do and how they were gonna do."


Kanuha said he wanted to record "so that we can show the world exactly what the state of Hawaii thinks about Hawaiians and how they treat them, how they treat our culture, and how they treat our spiritual beliefs and practices, which is basically to treat it like a bulldozer and just ram through all of it."

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The structures dismantled Thursday included one that had been built across the street from the Mauna Kea Visitor's Center in the early days of the protest encampment in 2015, following blockade arrests.

Activist Billy Freitas was at the scene Thursday and said 20 to 30 officers accompanied by state workers took the structure down and trucked it away.

"They posted a sign that says 'notice of disposition of abandoned or seized property,'" he said. "It was never abandoned, we have personal things in there."

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Demonstrators say that structure went up several months ago.

There were also two ahu, or shrines, at Mauna Kea’s summit that were dismantled. Activists said the shrines were built for religious purposes, and they consider the state’s actions desecration.

Attorney General Clare Connors said the shrines and structures were taken down “very carefully,” and will be stored for pick up.

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She also told reporters Thursday that the state wants to protect everyone’s rights, including those of protesters and construction workers.

“There is a difference of course between lawful speech and unlawful conduct,” she said. “When construction proceeds, the individuals working on Mauna Kea are going to need safe access.”



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BREAKING NEWS

BY PHONE: BILLY FREITAS

PRACTITIONER



In a statement, TMT International Observatory board of governors Chairman Henry Yang said he was pleased that the state had issued the “notice to proceed” and formulated a plan for ensuring construction workers can get to the summit.

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“We remain committed to being good stewards of Mauna Kea, and to honoring and respecting the culture and traditions of Hawaii,” he said.


"It has been a long process to get to this point. We are deeply grateful to our many friends and community supporters for their advice and for their encouragement and support of the TMT project over the years.”



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Q

The ruling came nearly a decade after the project was first announced as part of a new class of very large telescopes designed to spy farther into space and millions of years back in time, to when the first stars and galaxies were formed in the universe.

But opposition to TMT was immediate — and remains strong, raising questions about whether future protests might block construction vehicles seeking access to the mountain.

That’s what happened in 2015, when many activists were arrested while blocking construction crews from what they considered a sacred Native Hawaiian space.

This story will be updated.

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